



IAEA

International Atomic Energy Agency

MINUTES OF MEETING

Review of NPPD TC Projects: IRA2012 & IRA2013

29 – 30 November 2016

Vienna, VIC, Room: C0454

NPPD:

1. Mr. Amir Rahnema
2. Mr. Kazem Khezri

IAEA:

1. Ms. Marina Mishar
2. Mr. Pal Vincze
3. Mr. Peter Tarren
4. Mr. Diego Telleria
5. Mr. Anthony Patrick Ulses
6. Mr. Shin Morita
7. Mr. Kang Ki-Sig
8. Mr. Song Byoungseok

Objectives:

1. Update of Projects Work Plans including preparation of the PPARs
2. Review of Draft Project Design of IRA2016003

Relevant TC Projects:

1. IRA2012 Increasing NPPD's Capability in Planning and Implementing Activities Related to Design and Construction of Two New Pressurized Light Water NPP Units in Bushehr with Emphasis on Safety (ends 2017)
2. IRA2013 Enhancing the Level of Operational Safety and Reliability of the Bushehr Nuclear Power Plant-1 (ends 2019)

Prior Information Needed from Counterparts:

1. Priority of activities planned for 2017 under IRA2012 and IRA2013
2. Status follow-up actions on recommendations made in previous expert missions including status of action plans

4. Work Done

- Agenda of the meeting was discussed and approved (Attachment 1)
- Project Progress Report for both projects was presented by the Counterpart and also discussed and finalized. It was shared that the submission of the PPAR for 2016 will be done on-line on which it will be initiated by the PMO once the system is finalized.
- Work plans of IRA2012 and IRA2013 were updated accordingly to the current progress and prioritization with focus on tasks planned for implementation during 2017 (Attachments 2 and 3)
- Discussions were held on the proposed new project for 2018/2019 of which the CP shared new updates on the needs for this project.

5. Conclusions

- The Annual Meeting will be held in NPPD office, Tehran in 14-15 February 2017.
- The implementation of the group fellowship on construction management in the Republic of Korea was discussed. NPPD mentioned that the GFS will be implemented through the bilateral agreement with Republic of Korea, but the final decision will be made during the annual meeting in February 2017.
- The IAEA will inform the NPPD on the expected time of submission of Environmental software for necessary preparations for its utilization. For now, the expected timeline for submission is in Q2 2017.
- SV on Performance Safety Indicators (PSI) and Reliability Application and Evaluation planned for project IRA/2/011 was re-initiated in the work plan IRA/2/013 and nominations will be submitted (4 persons). The SV/FEs remaining under IRA2011 which are not able to be placed will be cancelled.
- CPs noted that End of Mission Reports is used to address identified issues and prepare high quality PPAR.
- New activity proposal: Follow-up Workshop/Expert Mission to the Mission in the Seismic Safety Assessment held in October 2016 needs confirmation of venue (IRA or VIC) and date in Annual meeting, February 2017.
- The PMO will share additional funding needed to implement planned activities for 2017 before end of December 2016.

Attachments:

1. Agenda of the meeting
2. Updated Work Plan of IRA2012
3. Updated Work Plan of IRA2013

Attachment 1

Agenda

Meeting on NPPD TC Projects: IRA2012 & IRA2013

29 – 30 November 2016

Vienna, VIC, Room: **C0454**

Tuesday 29 Nov 2016		
Time	Main Topic	Responsible
09:00-09:15	Introductions <ul style="list-style-type: none">- Agenda Review & Meeting Deliverables- Review of status of actions as agreed in May 2016 Meeting Conclusions (Annex 1)	All
09:15-10:15	Session I : Review of Achievement & Progress <ul style="list-style-type: none">- Presentation of Project progress (to date)- Presentation of IAEA inputs progress (to date)- Discussion on project progress & overall priority for 2017	CPs PMO, Lead TO All
10:15 – 11:00	Preparation of PPARs for 2016	CP
11:00 – 12:30	Session 2: Clarification of scope and objectives for the activities scheduled for 2017: <ul style="list-style-type: none">• Reference to IRA2012 and IRA2013 Work plan	TOs, CPs
12:45-14:00	<i>Lunch</i>	
14:00-15:30	Session 2: Clarification of scope and objectives for the activities scheduled for 2017: Continue ...	TOs, CPs
15:30-15:50	<i>Coffee Break</i>	
15:50-17:00	<ul style="list-style-type: none">• Session 2: Clarification of scope and objectives for the activities scheduled for 2017: Continue ...	TOs, CPs

Wednesday 30 November 2016		
Time	Main Topic	Responsible
09:00-10:30	Presentation on Project Design IRA2016003 Q&A	CPs All
10:30-10:45	<i>Coffee Break</i>	
10:45-12:45	<ul style="list-style-type: none"> • Refinement of Project Design based on comments received 	CPs
12:45-14:00	<i>Lunch</i>	
14:00-15:30	<ul style="list-style-type: none"> • Clarification of other activities/inputs (Annex 2) 	All
15:30-15:50	<i>Coffee Break</i>	
15:50-17:00	Discussion on <ul style="list-style-type: none"> • meeting conclusions • agreed follow-up actions • agenda for 2017 Coordination Meeting in Tehran 	All

IRA2012: Action Plan for implementation of Workplan activities in 2014-2017

as of 22.11.2016

Increasing NPPD's Capability in Planning and Implementing Activities Related to Design and Construction of Two New Pressurized Light Water NPP Units in Bushehr with Emphasis on Safety

No.	Activity	Input	Implementing Officers	Resource	Cost	Venue	Type	Date	Status	Priority	Comments
1.2 Conducting project review meetings											
1	1.2.1	Annual project review and planning meeting 2014	IAEA: Gueorguiev, NPPD: Fatourehian	3 IAEA staff for 3 days		Tehran and Bushehr	EM	Q1/2014	Completed		
2	1.2.2	Annual project review and planning meeting 2015		3 IAEA staff for 3 days		Tehran and Bushehr	EM	Q1 2015	Completed, 15-17 February 2015 in Tehran		
3	1.2.3	Annual project review and planning meeting 2016		3 IAEA staff for 3 days		Tehran and Bushehr	EM	Q1 2016	Completed 29 February - 2 March		
4	1.2.4	Annual project review and planning meeting will be joint with IRA/2012, IRA/2013, IRA/9023 and IRA/9024 Annual meeting.				Tehran	EM	Q1 2017			14-15 Feb 2017 as agreed date

1.5 IAEA field monitoring											
5	1.5.1	Regular field monitoring and review missions	IAEA: Gueorguiev, NPPD: Fatourechian	1 IAEA staff for 4 days		Tehran and Bushehr	Meeting	2014	Completed		
6	1.5.2	Regular field monitoring and review missions		1 IAEA staff for 4 days		Tehran and Bushehr	Meeting	2015	Completed		
7	1.5.3	Regular field monitoring and review missions		1 IAEA staff for 4 days		Tehran and Bushehr	Meeting	2016			1-2 missions per quarter jointly with IRA2013
8	1.5.4	Regular field monitoring and review missions		1 IAEA staff for 4 days		Tehran and Bushehr	Meeting	2017			1-2 missions per quarter jointly with IRA2013
2.2 Spent fuel storage and waste management programs											
9	2.2.1	EM to assist in radioactive waste management programme, including scaling factor application	IAEA:Ormai/Dyck, NPPD:Sheikholeslami	1 IAEA staff and 3 IEX		Tehran	EM	27 Sept - 1 Oct 2014	Jointly with IRA2011/1.17.3 Completed		
10	2.2.2	EM to assist in spent fuel storage	IAEA: C. Hill NPPD: Derakhahandeh	1 IAEA staff and 3 IEX		TBD	EM	Q2/2018- Shifted to New Project		H	Follow-up mission under 2011. Postpone to New Project.NPPD will elaborate its need 2 months in advance.
3.1 Development of training materials for two new NPP projects											

11	3.1.1	EM to assist in review of selected/developed training materials for future operators for two new NPP units	IAEA: D. Drury NPPD: Fatourehian	1 IAEA staff and 3 IEX		TBD	HBA/EM TBD	Q4/2017	To be implemented on the developed materials provided by the supplier of two new units	H	
12	3.1.2	EM to assist in review of selected/developed training materials for future operators for two new NPP units	IAEA: D. Drury NPPD: Fatourehian	1 IAEA staff and 3 IEX		TBD	HBA/EM TBD	Q4/2017	To be implemented on the developed materials provided by the supplier of two new units	H	merged with 3.1.1

3.2. Risk management during preconstruction and construction phases of an actual nuclear power plant

13	3.2.1.	WS on knowledge and risk management during preconstruction and construction phase of PWR with focus on safety	IAEA: Kang, NPPD: Tajbakhsh	1 IAEA staff and 2 IEX for 4 days		Tehran Bushehr	WS	27-30 April 2014	Completed		
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5.1 Safety and quality requirements in construction of new PWR units at Bushehr by participating local organizations

14	5.1.1	WS To assist in development of the Local Industry Utilization Plan	IAEA: Kang NPPD: Derakhshandeh	1 IAEA staff and 2 IEX for 5 days		Tehran	WS	Q2/2017	NPPD will provide the necessary inputs (expectation) by the end of Feb.	M	NPPD: Specific issues related to local industry will be sent to the IAEA two months before the WS
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6.1 Public information and awareness programmes development											
15	6.1.1	WS on public information and awareness programmes	IAEA:B. Pagannone/ NPPD:Rahnama	4-6 NEX and 2 IEX		Tehran	WS	28 Sept-1 Oct 2014	Completed		
16	6.1.2	EM to assist on the establishment of public information and awareness centre	IAEA: D. Drury NPPD: Rahnama	1 IAEA staff and 2 IEX		Tehran/Bushehr	EM	Q3/2017		M	NPPD is requested to send the IAEA two months before the draft plan/status description for the Centre.
17	6.1.3	EM to review results of Stakeholder Involvement Plan	IAEA: D. Drury NPPD: Rahnama	TBD		Tehran	EM	2017	Based on the results of 6.1.2	M	Additional request as follow-up of 6.1.1. New request
18	6.1.4	SV on benchmarnig on stakeholder involvement	IAEA: D. Drury NPPD: Rahnama	TBD		TBD	SV	2017		M	Additional request as follow-up of 6.1.1. New request. NFs will send 6 months before.
2.1 Seismic safety assessment											
19	2.1.1	EM to assist in seismic safety assessment	IAEA:Y.Fukushima, NPPD: Shirzadi/Derakhshandeh	1 IAEA staff and 3 IEX		Tehran / Bushehr	EM	1-4 october 2016	Completed	H	

20	2.1.2	WS/EM on seismic safety	IAEA:Y.Fukushima, NPPD: Shirzadi/Derakhshandeh	TBD (4 days)		TBD	WS/EM	Q2/2017		M	Considering above report NPPD will define the scope of needs for further proceed.
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3.3 Corporate knowledge management

21	3.3.1	EM on corporate knowledge management for BNPP - 2&3 with focus on safety	IAEA:Z. Pasztory NPPD:Rahnama/Sheikholeslami	1 IAEA staff and 3 IEX, 4 days		Tehran	EM	15-18 Nov. 2015	Completed		
22	3.3.2	EM on Management and maintaining design basis information through life cycle of BNPP-2&3	IAEA:J. de Grosbois, Kolomiets 1 IAEA staff and 3IEX	1 IAEA + 2 IEX		Tehran	EM	21-25 April 2016 (3 days)	Completed		

3.4 Nuclear material accounting and control during preoperational phases of two new PWR units in Bushehr

23	3.4.1	WS on nuclear material accounting and control during preoperational phases of the two new PWR units in Bushehr							NPPD does not need further assistance		
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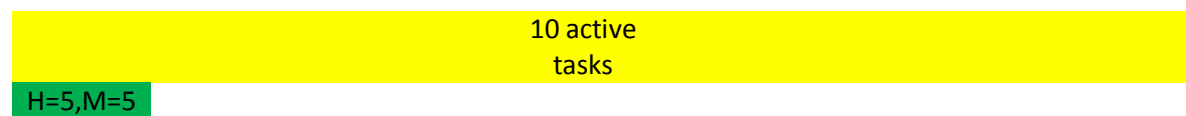
24	3.4.2	SV on nuclear material accounting and control during preoperational phases of the two new PWR units in Bushehr (SG)	IAEA: M. Mishar, SG NPPD: NPPD:Amini	3NEX		TBD	SV	2016	Cancelled	H	NFs to be provided timely in advance
4.4 Human Resource Development (HRD) and Work Force Planning (WFP) programmes for the two new PWR units in Bushehr											
25	4.1.1	EM to assist in evaluation of developed programmes for updation owner's training system for the two new PWR units	IAEA: Drury, NPPD: Rahn timer/Fatourehian	1 IAEA staff and 3 IEX		TBD	HBA/EM TBD	Q2/2017		H	Specific needs to be provided by NPPD on the basis of the contract for two new units. Jointly with 4.2.1 New task (Possible home based assignment)
26	4.1.2	EM to assist in evaluation of developed programmes to update owner's training system for the two new PWR units	IAEA: Drury, NPPD: Rahn timer/Fatourehian	1 IAEA staff and 3 IEX		TBD	HBA/EM TBD	Q2/2017	To be moved to 2018-2019, new project	H	Specific needs to be provided by NPPD on the basis of the contract for two new units. New task
27	4.1.3	Group Trainig programme on pre-construction management with focus on safety requirements	IAEA: Kang; NPPD: Fatourehian	1 IAEA Staff, 20 NEX		ICTC, Beijing, China	WS	24 Aug.-4 Sept. 2015	Completed		

28	4.1.4	EM to assist in development of comprehensive model for effective project management of the two new NPP units (1 + 3 IEX)	IAEA: Pekka Pyy. NPPD: Rahnama	1 IAEA Staff and 3 IEX		Tehran	EM	8-11 Nov. 2015	Completed		
29	4.1.5	Group Fellowship Training on construction and commissioning management with focus on safety requirements	IAEA: K. S. Kang NPPD: Fatourehian/Rahnama	2 IAEA staff and 20 NEX. The cost for the WS is expected cca. 100 000 EURs.		S. Korea	Group fellowship training	Q4/2017		H	
30	4.1.6	EM to assist in the review of the developed Project Management System for units 2 and 3 of the new project.	IAEA: Pekka Pyy. NPPD: Fatourehian/Rahnama	1 IAEA/3 IEX 4 days.		Tehran	EM	Q3 /2017		H	NPPD: To send the scope and focus and the related documents two months before the mission. New request

4.2 Review and evaluation of the developed programme for upgrading owner's training system for the new NPP units

31	4.2.1	EM to assist in review and evaluation of the developed programme for upgrading owner's training system for the two new PWR units	IAEA: D. Drury NPPD: Fatourehian	1 IAEA staff and 3 IEX		TBD	EM and HBA	Q2/2017		H	Jointly with 4.1.1
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- Cancelled
- Further clarifications needed
- Completed
- Move to new project (2018-2019)



Enhancing the Level of Operational Safety and Reliability of the Bushehr Nuclear Power Plant-1

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5	3.1.1	WS on "modern methods for measuring hydrogen concentration in containment "	IAEA: Song, NPPD: Deilami	1 IAEA+3IEX		Bushehr	WS	18-21 Feb 2017	In progress	H	
3.2 Training on environmental qualification of safety equipment of BNPP-1											
6	3.2.1 3	SV on " environmental qualification of safety equipment BNPP"	IAEA: K. Kang, NPPD: Banazadeh	1 NEX+HBA IEX		TBD	SV	Q2-Q3/2017	Pending SV nomination. As agreed in the May coordination meeting, the SV to be refocused on specific issues of integrated KWU equipment into BNPP-1 Project. This can be reflected in the SV nomination form. Review of the SV can only be done once we receive the SV nominations. NPPD will send 3 NFs by the mid of Dec 2016 through official channel. Considering above mentioned prerequisite, it is expected to hold the task on Q2/Q3 2017	H	To be refocused on specific issues of integrated KWU equipment into BNPP-1 Project. The venue can be Germany or Brazil
7	3.2.2 3	SV on " environmental qualification of safety equipment BNPP"	IAEA: K. Kang, NPPD: Banazadeh	1 NEX		TBD	SV	Q2-Q3/2017	NPPD will send 3 NFs by the mid of Dec 2016 through official channel. Considering above mentioned necessary prerequisite, it is expected to hold the task on Q2/Q3 2017	H	To be refocused on specific issues of integrated KWU equipment into BNPP-1 Project. The venue can be Germany or Brazil

8	3.2.3 3	SV on " environmental qualification of safety equipment BNPP"	IAEA: K. Kang, NPPD: Banazadeh	1 NEX		TBD	SV	Q2- Q3/201 7	NPPD will send 3 NFs by the mid of Dec 2016 through official channel. Considering above mentioned necessary prerequisite, it is expected to hold the task on Q2/Q3 2017	H	To be refocused on specific issues of integrated KWU equipment into BNPP-1 Project. The venue can be Germany or Brazil
3.3 Training on equipment reliability assessment techniques of equipment during operation											
9	3.3.9	WS on "Equipment reliability assessment techniques of equipment during operation"	IAEA: K. Kang, NPPD: Deilami	1 IAEA+3IEX		Bushehr	WS	Q3/201 6	TO is awaiting confirmation/response from the CP for this mission. We urgently need the confirmation of dated for this mission (possible to take place end of November and December if we receive the proposed dates by next week.)		Deleted
10	3.3.1 01	SV on PSI and reliability application and evaluation	IAEA: K. Kang, NPPD:Deylami	4 NEX		TBD	SV	Q4/201 7	Shifted from previous project IRA /2/011	H	NFs will send to IAEA 6 months before.
11	3.3.1 02	SV on PSI and reliability application and evaluation	IAEA: K. Kang, NPPD:Deylami	4 NEX		TBD	SV	Q4/201 7	Shifted from previous project IRA /2/011	H	NFs will send to IAEA 6 months before.
12	3.3.1 03	SV on PSI and reliability application and evaluation	IAEA: K. Kang, NPPD:Deylami	4 NEX		TBD	SV	Q4/201 7	Shifted from previous project IRA /2/011	H	NFs will send to IAEA 6 months before.
13	3.3.1 04	SV on PSI and reliability application and evaluation	IAEA: K. Kang, NPPD:Deylami	4 NEX		TBD	SV	Q4/201 7	Shifted from previous project IRA /2/011	H	NFs will send to IAEA 6 months before.

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15	3.13.1	EM on "Core Management calculation for Safe Operation of BNPP-1"	IAEA:T. Ulses, NPPD: Ghods-Abbaspour	1 IAEA+2IEX		Tehran	EM	Q3-4 /2017	In progress	M	IAEA request further clarification of what NPPD are seeking at least two months before.(availability of software and scope of the mission)
3.14 Assistance on safety aspects of fresh and spent fuel engineering											
16	3.14.1	EM on "Fuel Integrity Monitoring for Safe Operation of BNPP-1 "(Follow up - of the related activity conducted under project IRA 2 011)	IAEA: T. Ulses, NPPD: Ghods-Abbasopur	1 IAEA+2IEX		Tehran	EM	Q2/2018			To move 2018-2019
17	3.14.2	EM on physical behaviour (thermal, neutronic and radiation) of spent fuel	IAEA; C .Hill, NPPD: Ghods-Abbaspour	1 IAEA+2 IEX		Tehran	EM	Q2/2017		M	
5.5 Assistance in development of selected training scenarios for severe accidents in FSS											
18	5.5.1	EM on " Development of selected training scenarios for severe accidents in FSS "	IAEA: T. Ulses NPPD: Talebianzadeh, A. Rahnama	1 IAEA+2IEX		Bushehr	EM	Q2 /2018			To be discussed afterimplementati on of 6.3.1,
5.6 Assistance in development & improvement of training system of maintenance & repair personnel											
19	5.6.1	EM on " Development & improvement of training system of maintenance & repair personnel"	IAEA: D. Drury, J. Song NPPD: Rahnama-Talebianzadeh	1IAEA+2IEX		Bushehr/Tehra n	EM	Q3 /2017	the technical officer is awaiting the scope/ToR for this mission. The tentative date is 5-9 November 2016. We would appreciate to receive soonest possible the ToR to compose the expert team for this mission.	H	

6.1 Assistance in review of BNPP-1 off-site emergency preparedness and response

20	6.1.1	WS on " Assistance in review of off-site emergency preparedness and response of BNPP and off-site organizations in Emergency situation"	IAEA: P.Tarren, NPPD: Abbaspour	1IAEA+2IEX		Bushehr	WS	Q2/2017 - 13-17 May 2017	NPPD will send its expectations and scope 2 months in advance. In progress	M	NPPD: To send clarification on the focus: Training on off-site response to radiological emergency situation BNPP-1. Ramon De la Vega is the IEC Contact Point.
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6.3 Assistance on Severe Accident (SA) Analysis of BNPP-1

21	6.3.1	EM to review progress in development of the severe accident analysis model (using computer code) for BNPP-1	IAEA: T. Ulses, NPPD: Derakhshandeh	1IAEA+2IEX		Tehran	EM	Q2/2017		H	Depending on availability computer code
22	6.3.2	RM to review the progress in development of the severe accident management guidelines (SAMG) for the BNPP-1 (2017)	IAEA: T. Ulses, NPPD: Derakhshandeh	1IAEA+2IEX		Tehran	TSR-AM	Q3/2017		H	TSR-AM: Technical Safety Review-Accident Management

7.3 Assistance on methods for gamma spectrometry analysis of primary circuit samples and on off-site environmental samples for normal and emergency conditions of BNPP-1

23	7.3.1	EM on " Assistance on methods for gamma spectrometry analysis of primary circuit samples and on and off-site environmental samples for normal and emergency conditions of BNPP-1"	IAEA: M. Groening, NPPD: Abbaspour	1IAEA+3IEX		Bushehr	EM	3-7 Dec 2016	In progress	H	
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7.4 Assistance in environmental monitoring programme for BNPP-1 (follow-up of assistance provided in IRA2011)

24	7.4.1	Support for the procurement ESTE environmental monitoring software specific for BNPP-1	IAEA: D. Talleria, NPPD: Abbaspour	Procurement		Bushehr	Procurement	May-17	IAEA had initiated the procurement process, GCS has been transferred into the project. The procurement process is in proceed . It is expected to install and operate in May 2017 at Bushehr.	H	IAEA is requested to provide the report on the last status of submitting ESTE to CP.
2.3 Implementation of OSART mission											
25	2.3.1	18 days , OSART Mission (Partial/local cost supporting by host)	IAEA: P. Tarren, NPPD: Abbaspour (90 000 EUR)	3IAEA+12IE X for 18 days		Bushehr	EM	13-30 Jan. 2018		H	
2.5 Assistance in review of implementation of the NPPD Integrated Management System (IMS), plans for improvements including safety requirements for compliance by services providers											
26	2.5.1	EM on " Assistance in review of implementation of the developed NPPD IMS"	IAEA: P. Pyy, NPPD: Choupanzideh	1 IAEA+3IEX		Tehran	EM	16-20 July 2016	Completed	H	
2.7 Enhancing the capabilities in nuclear oversight functions by participation in OSART mission											
27	2.7.1	Participation in external OSART mission in NPP, preferable the same as BNPP is,for more readiness to implement own OSART mission in Q1 2017(partially/ local cost to be paid by the host)	IAEA: P. Tarren, NPPD: Abbaspour	1-3NEX		TBD	FS	2017		H	NPPD requests to involve 3 NEXs.
#####	2.7.2	Asist visits on operation, Maintenance, technical support and HTO areas as preparation for OSART mission	IAEA: P. Tarren, NPPD: Abbaspour	1IAEA+4IEX		Q2 / 2017 , 5 working days	EM			H	New Request
3.1 Training on modern method for measuring hydrogen concentration in containment and chemical-physical internal cleaning of NPP equipment											

28	3.1.2	WS on "Chemical-Physical internal cleaning of reactor equipment"	IAEA: B.Song, K.Makela, NPPD: Deylami	1 IAEA+2IEX		Bushehr	WS	Q2/2017		H	Deleted.
3.4 Training on containment leakage tests and calculations after outage											
29	3.4.1	SV on " Containment leakage tests and calculations after outage"	IAEA: B.Song, NPPD: Deylami	1NEX		TBD	SV	Q2/2018		H	Move to the next cycle. (2018-2019)
30	3.4.2	SV on " Containment leakage tests and calculations after outage"	IAEA: B.Song, NPPD: Deylami	1NEX		TBD	SV	Q2/2018		H	Move to the next cycle. (2018-2019)
31	3.4.3	SV on " Containment leakage tests and calculations after outage"	IAEA: B.Song, NPPD: Deylami	1NEX		TBD	SV	Q2/2018		H	Move to the next cycle. (2018-2019)
32	3.4.4	SV on " Containment leakage tests and calculations after outage"	IAEA: B.Song, NPPD: Deylami	1NEX		TBD	SV	Q2/2018		H	Move to the next cycle. (2018-2019)
3.5 Training on planning, organizing and implementing the modernization in top level control unit systems under LICS operating system											
33	3.5.1	SV on "Decreasing the time response of modern I&C system"	IAEA; J. Eiler, NPPD: Deylami-Dehghani	1 NEX		TBD	SV	Q3/2017	NPPD will send 4 NFs by the end of Dec 2016	M	NFs should be sent to IAEA at least 8 months before.
34	3.5.2	SV on "Decreasing the time response of modern I&C system"	IAEA: J. Eiler, NPPD: Deylami-Dehghani	1 NEX		TBD	SV	Q3/2017	NPPD will send 4 NFs by the end of Dec 2016	M	NFs should be sent to IAEA at least 8 months before.
35	3.5.3	SV on "Decreasing the time response of modern I&C system"	IAEA: J. Eiler, NPPD: Deylami-Dehghani	1 NEX		TBD	SV	Q3/2017	NPPD will send 4 NFs by the end of Dec 2016	M	NFs should be sent to IAEA at least 8 months before.
36	3.5.4	SV on "Decreasing the time response of modern I&C system"	IAEA: J. Eiler, NPPD:	1 NEX		TBD	SV	Q3/2017	NPPD will send 4 NFs by the end of Dec 2016	M	NFs should be sent to IAEA at least 8 months before.
3.6 Assistance to strenghten the capability of BNPP personnel on application of new IAEA standards in modification MCR											
37	3.6.1	WS on " Application on new IAEA standadrds in modification I&C on MCR"	IAEA: J. Eiler, NPPD: Deylami-Dehghani	1IAEA+3IEX			WS	Q1/2018			Shifted to next cycle(2018-2019_

3.7 Assistance on safety aspects of extended BNPP-1 refueling cycles

38	3.7.1	EM on "safety aspects of extended BNPP-1 refueling cycles"	IAEA: T.Ulses / H.Varjonen, NPPD: Ghods, Abbaspour	1IAEA+2IEX		Tehran	EM	Q1/2017		H	Deleted
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3.9 Integrity safety analysis of thereactor pressure vessel and reactor coolant system

39	3.9.1	WS on Assessment of the RPV neutron irradiation embrittlement as well as Analysis of RPV surveillance specimens mechanical tests, High and low cycle fatigue analysis for strength assessment of Reactor Coolant System	IAEA: K. Kang, NPPD: Ghods-Deylami	1IAEA+2IEX		Tehran	WS	Q3/2017		M	
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3.12 Assistance in performing the living PSA of the BNPP-1

40	3.12.1	EM to review the progress and to improve NPPD capability in living PSA of the BNPP-1	IAEA: I Kuzmina, NPPD: Ghods	1IAEA+2IEX			EM	Q1/2018			NPPD: To send information on the scope and focus including utilization of risk spectrum software in two months before the mission.
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3.14 Assistance on safety aspects of fresh and spent fuel engineering

41	3.14.2	EM on Physical Behaviour (thermal, neutronic and radiation) of spent fuel	IAEA: C. Hill / T.Ulises, NPPD: Derakhshandeh	1 IAEA+2 IEX		Tehran / Bushehr	EM	Q2/2017		M	
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4.1 Training on modern methods of Condition Based Maintenance at BNPP-1 for optimizing maintenance and repair programmes

42	4.1.1	EM on "modern methods of Condition Based Maintenance at BNPP-1 for optimizing maintenance and repair programmes " in Q1 2017, (1 IAEA +3 IEX)	IAEA: H. Varjonen, NPPD: Roshankar	1IAEA+3IEX		Bushehr	EM	Q3/2017		H	
4.6 Assistance on improvement of the procurement system for goods and services necessary for BNPP safe and reliable operation and maintenance											
43	4.6.1	EM on " Assistance on improvement of the procurement system for goods and services necessary for BNPP safe and reliable operation and maintenance"	IAEA:J. Moore, NPPD: Tajbakhsh	1IAEA+3IEX + 5 NEX		Vienna	EM/HBA	Q1 / 2017	The date is under negotiation. IAEA :27 March , NPPD request to be held in end of Febraury.	H	NFs should be sent to IAEA at least 2 months before.
5.1 Training on competency models, method/assessment tools for effective competence and performance management of BNPP-1 personnel											
44	5.1.1	WS on " Competency models, method /assessment tools for effective competence and performance management of BNPP-1 personnel"	IAEA: D. Drury, NPPD: Talebianzadeh - Rahnama	1IAEA+2IEX		Bushehr	WS	Q2/2017		M	
5.2 Training on competency models, method/assessment tools for effective competence and performance management of BNPP-1 personnel											
45	5.2.1	Scientific visit on " competency models, method /assessment tools for effective competence and performance management of BNPP-1 personnel"	IAEA: D. Drury, NPPD: Talebianzadeh - Rahnama	1 NEX		TBD	SV	Q3/2017		M	NFs will send 6 months before.
46	5.2.2	Scientific visit on " competency models, method /assessment tools for effective competence and performance management of BNPP-1 personnel"	IAEA: D. Drury, NPPD: Talebianzadeh - Rahnama	1 NEX		TBD	SV	Q3/2017		M	NFs will send 6 months before.

47	5.2.3	Scientific visit on "competency models, method /assessment tools for effective competence and performance management of BNPP-1 personnel"	IAEA: D. Drury, NPPD: Talebianzadeh - Rahnama	1 NEX		TBD	SV	Q3/2017		M	NFs will send 6 months before.
7.4 Assistance in environmental monitoring programme for BNPP-1 (follow-up of assistance provided in IRA2011)											
48	7.4.2	EM on "Review and assesment of results of environmental monitoring programme using the software ESTE"	IAEA: D. Talleria, NPPD: Abbaspour	1 IAEA+2IEX		Bushehr	EM	Q2/2018		M	One year after installation of ESTE at BNPP-1.
4.4 Training on optimizing overall WWER-1000 reactor and refueling process with focus on new techniques and materials, modern tools and advance method to strenghten the capability refueling machine operators											
49	4.4.1 1	Scientific Visit on safe WWER-1000 reactor and refueling process with focus on new techniques and materials, modern tools and advance method to strenghten the capability refueling machine operators	IAEA: K. S. Kang NPPD:Roshankar	3NEX	5 days	TBD	SV	2017	3 NFs sent through official channel 23.11.2016.(Mress. Tahernia,Ansari&Sedagh at)	H	New request for 2016 NPPD: to send the scope and focus of this task two months before the mission. (Potential for UKR, Zaporozhe)
50	4.4.1 2	Scientific Visit on safe WWER-1000 reactor and refueling process with focus on new techniques and materials, modern tools and advance method to strenghten the capability refueling machine operators	IAEA: K. S. Kang NPPD:Roshankar	3NEX	5 days	TBD	SV	2017	3 NFs sent through official channel 23.11.2016.(Mress. Tahernia,Ansari&Sedagh at)	H	New request for 2016 NPPD: to send the scope and focus of this task two months before the mission. (Potential for UKR, Zaporozhe)

51	4.4.1 3	Scientific Visit on safe WWER-1000 reactor and refueling process with focus on new techniques and materials, modern tools and advance method to strengthen the capability refueling machine operators	IAEA: K. S. Kang NPPD:Roshankar	3NEX	5 day s	TBD	SV	2017	3 NFs sent through official channel 23.11.2016.(Mress. Tahernia,Ansari&Sedaghat)	H	New request for 2016 NPPD: to send the scope and focus of this task two months before the mission. (Potential for UKR, Zaporozhe)
4.3 Training on advance methods, new techniques and materials,modern tools for maintenance and repair of WWER-1000 reactor refueling machine equipment and pipelines at NPPs											
52	4.3.1	WS on outage optimization through advance methods,new techniques and materials,modern tools for maintenance and repair of WWER-1000 reactor refueling machine equipment and pipelines at NPPs	IAEA: H. Varjonen NPPD:Roshankar	1IAEA+3IEX	4 day s	Bushehr		WS	Q3/2017	H	New for 2017. NPPD: to send the scope and focus of this task two months before the mission.

	Cancelled
	Further clarifications needed
	Completed
	Move to the next cycle

27 active tasks

H=
18,M=
9