

# **Program for participation of the Regional Crisis Center in the emergency preparedness exercise at Bushehr NPP (3 October 2018)**

**1. Date and time for implementation of the emergency preparedness exercise:** on 03.10.2018 from 08:00 Tehran time (07:30 Moscow time). Duration of the emergency preparedness exercise – 4.5 hours in the rough (including operational break).

## **2. Purpose of the exercise**

Exercise of the “Emergency Response Procedure” and “Regulation for Information Exchange between the Members of the Regional Crisis Center of WANO Moscow Centre” in response to a simulated accident at Bushehr NPP.

## **3. Exercise objectives**

3.1 Arrangement of urgent communication between RCC members to inform them about a simulated accident at Bushehr NPP in compliance with the “Regulation for Information Exchange between the Members of the Regional Crisis Center of WANO Moscow Centre”.

3.2 Exercise of communication between Bushehr NPP, RCC, TSCs, SCC of Rosatom and Utilities/NPPs – the RCC participants, in the frames of response to a simulated accident within the boundaries of the NPP industrial site / NPP general accident.

3.3 Exercise for the duty shift of the Operational Dispatch Division of the fast-response dispatching department of technological branch JSC “Concern Rosenergoatom” when taking response actions within the frames of the RCC.

3.4 Exercise for the RCC and TSCs how to provide expert/consultant and engineering & technical support in response to an accident within the boundaries of the NPP industrial site / general accident at a VVER-type reactor NPP.

**4.** V.A. Golubkin, the Chief Technologist of the Department for Emergency Preparedness and Radiation Protection of Rosenergoatom Concern JSC is assigned to be the **Manager of emergency preparedness exercise on behalf of the RCC.**

## **5. Participants of the exercise**

*On behalf of the Russian Federation*

- Rosenergoatom Concern JSC, OPAS members;
- fast-response dispatching department of technological branch JSC “Concern Rosenergoatom”;
- Technical Support Centers (OKB “Gidropress”, NRC Kurchatov Institute, JSC VNIIAES, RPA “Typhoon”) – upon the request from Bushehr NPP;
- Situation and Crisis Center (SCC) of Rosatom, subject to agreement;
- Technical Support Group of the JSC “Consyst-OS”.

*On behalf of foreign organizations*

- On behalf of Iran (NPPD, Bushehr NPP);
- On behalf of Armenia (Armenian NPP);
- On behalf of Czech (JSC CEZ);
- On behalf of Hungary (Paks NPP);
- On behalf of China (Jiangsu Nuclear Power Corporation);
- On behalf of Slovakia (Slovenské elektrárne);
- On behalf of Finland (Fortum Corporation, Loviisa NPP);
- On behalf of Ukraine (NNEGC “Energoatom”);
- On behalf of Bulgaria (Kozloduy NPP);

- On behalf of Belarus Republic (Belarus NPP).

*International organizations*

World Association of Nuclear Operators (WANO), Moscow Centre.

## **6. Initial arrangement of the participants**

6.1 The manager of emergency preparedness exercise, members of RCC functional support group and CC functional support group experts are at their working places in the CC (VNIIAES building). They start exercise activities after notification made by automated notification system.

6.2 TSCs experts (NRC KI, OKB “Gidropress”, JSC VNIIAES and RPA “Typhoon”) carry on daily activities not related with the exercise. They get involved in the exercise upon the order from manager of the exercise.

## **7. Method for the exercise.**

7.1 Bushehr NPP provide information on the simulated accident in accordance with the “Regulation for Information Exchange”.

7.2 The RCC provides translation and informing of Utilities/NPPs – RCC participants on the simulated accident in accordance with the “Regulation for Information Exchange”. Besides, RCC formats should be posted on the CC Ftp-server.

7.3 Facsimile and e-mail shall be used as the main communication channel in frames of the exercise; in addition, all messages on the exercise shall be duplicated at the ftp-server of the Crisis Center. Videoconferencing shall be arranged for communication with the TSCs (NRC KI, OKB “Gidropress” and RPA “Typhoon”).

RCC contact information:

Fax: +7 495 644 33 88;

E-mail: [nskcl@rosenergoatom.ru](mailto:nskcl@rosenergoatom.ru);

Manager of the exercise: tel. +7 965 228 70 56;

Crisis Centre Shift Supervisor: tel.: +7 495 589 25 27;

7.4 Bushehr NPP contact information:

**Hossein GHAFARI**, Director of Bushehr NPP-1, Manager of Exercise:

- Telephone number of drill manager for responding: +987731112644.

**Mohammad Hadi JAFARI**, Coordinator person responsible for interaction with RCC:

- **Telephone number of Crisis Center Coordinator Person for responding:**  
**+987731112640;**
- **Fax number of Crisis Center for responding: +987731112655;**
- **E-mail of Crisis Center Coordinator Person:** [jafari.hadi@nppd.co.ir](mailto:jafari.hadi@nppd.co.ir);
- Telephone number of plant shift Supervisor:  
+987731113112 & +987731114403 (24 hours);

7.5 All messages sent within the training/exercise shall be registered as per “Regulation for Information Exchange” (date and time of sending/receiving, sender/receiver details).

7.6 All the information sent within the training/exercise shall be respectively marked as “Exercise!” both in Russian and in English.

7.7 Transmission of all messages via using the services of videoconferencing, e-mail, ftp-server, telephone and facsimile communication shall start with the word “Exercise”.

7.8 The manager of the exercise shall decide to assemble the OPAS team members (using automated notification system) and TSC experts (NRC KI, OKB “Gidropress”, JSC VNIIAES and RPA “Typhoon”, using videoconferencing).

7.9 Upon completion of the exercise, an audio- or videoconference shall be arranged between the Regional Crisis Center and Bushehr NPP.

## **8 Evaluation of the emergency preparedness exercise**

The emergency preparedness exercise at Bushehr NPP shall be evaluated using following criteria (appendix B):

- following the “Regulation for Information Exchange” in terms of messaging timing;
- using of actual RCC formats;
- accuracy of filling of RCC formats and correctness of messaging sequence;
- adequacy of the data provided to fully understand and assess a situation on the plant;
- confirmation of receipt of RCC messages;
- adequacy of initial event description in accordance with exercise scenario;
- communication means capability during the exercise (audio- and videoconferencing);
- availability of backup communication means;
- arrangement of an expert/consultant support;
- a list of emergency response forces and facilities used during the exercise;
- RCC confirmation of receipt forwarded messages.

9. Plan for the RCC and TSCs participation in the emergency preparedness exercise at Bushehr NPP (03.10.2018)

Item	Astronomical (operating) time	Development of simulated events, participants' response	Participants
1.	H+0:00	Start of the emergency preparedness exercise via simulating an initiating event at Bushehr NPP (Iran)	All participants
2.	H+0:00 ÷ H+0:30	Receiving message about safety-important event(s) at Bushehr NPP (acc. to RCC-2 message form)	Crisis Center Shift Supervisor (CCSS) Bushehr NPP
3.	H+0:05 ÷ H+0:15	Message from the RCC to Bushehr NPP concerning receiving of information on safety-important events at Bushehr NPP	CCSS
4.	H+0:20 ÷ H+0:50	Translation of the message about safety-important events at Bushehr NPP (acc. to RCC-2 message form)	RCC Functional Support Group (FSG)
5.	H+0:25 ÷ H+0:55	Alert of the Utilities/NPPs - members of the RCC about safety-important events at Bushehr NPP.	CCSS
6.	H+0:30 ÷ H+1:00	Receiving a message about the accident within the boundaries of the NPP industrial site / general accident (acc. to RCC-3 message form).	CCSS Bushehr NPP
7.	H+0:35 ÷ H+1:05	Message from the RCC to Bushehr NPP concerning receiving of information about the accident within the boundaries of the NPP industrial site or general accident.	CCSS Bushehr NPP
8.	H+0:50 ÷ H+1:20	Translation of the message about the accident within the boundaries of the NPP industrial site / general accident.	RCC FSG
9.	H+0:55 ÷ H+1:25	Alert about the accident within the boundaries of the NPP industrial site / general accident at Bushehr NPP by the Head of the RCC (V.A. Golubkin).	CCSS
10.	In case the Head of RCC takes decision	Taking a decision on the RCC placement under "High alert" mode.	Head of the RCC
11.	At the latest H+2:30	Alert of the Utilities/NPPs - members of the RCC about the accident within the boundaries of the NPP industrial site or general accident.	CCSS, Utilities/NPPs – participants of the RCC
12.	When ready	Receiving data from Bushehr NPP as per monitoring of the process at power units and radiation situation at the NPP and within the region of its siting (acc.to RCC-3a message form).	CCSS Bushehr NPP
13.	When received	Transmission of the information received as per monitoring of the process at power units and radiation situation at the NPP and within the region of its siting (acc.to RCC-3a message form) to TSCs and Utilities/NPPs – participants of the RCC	CCSS, Utilities/NPPs – participants of the RCC
14.		Completion of the emergency preparedness exercise	All participants

Utilities/NPPs	
<b>Date and time of the emergency preparedness exercise/drill</b>	
<b>Level of participation in the RCC</b>	
<b>Overall duration of the exercise/drill</b>	
<b>Earlier notification of the RCC about exercise/drill to be conducted*</b>	

### Evaluation format for OO/NPP - RCC

<b>№ п/п</b>	<b>Evaluation criterion</b>	<b>Fulfilment (SAT, NOF, UNSAT, NOT**)</b>
1.	Following the “Regulation for Information Exchange” in terms of messaging timing	
2.	Accuracy of filling of RCC formats and correctness of messaging sequence	
3.	Number of received and forwarded be RCC messages	
4.	Adequacy of the data provided to fully understand and assess a situation on the plant	
5.	Adequacy of initial event description in accordance with exercise scenario	
6.	Using of actual RCC formats	
7.	Communication means capability during the exercise (audio- and videoconferencing)	
8.	Availability of backup communication means	
9.	Arrangement of an expert/consultant support	
10.	Providing of emergency response forces and facilities used during the exercise	
11.	Confirmation of receipt of RCC messages	

**Additional comments (not mandatory):**

\* **Notified/ not notified.** Fill this field to clarify if RCC was notified in advance about the exercise/drill or not

\*\* **SAT:** The criterion is fulfilled satisfactorily. Possibly, there are insignificant shortcomings that do not affect the overall fulfillment of the performance criterion.

**NOF:** The criterion is not fully fulfilled. Efforts are needed to address the shortcomings.

**UNSAT:** Fulfilled unsatisfactorily. The performance criterion is not fulfilled.

**NOT:** Not applicable to the RCC member (depends on the level of participation).



**РОСЭНЕРГОАТОМ**

ЭЛЕКТРОЭНЕРГЕТИЧЕСКИЙ ДИВИЗИОН РОСАТОМА

**СОГЛАСОВАНО**

Заместитель Директора

ВАО АЭС-МЦ

**УТВЕРЖДАЮ**

Заместитель директора по

производству и эксплуатации

АЭС – директор Департамента

противоаварийной готовности и

радиационной защиты

С.В. Выборнов

“28”

09

2018 г.

В.Е. Хлебцевич

“ ”

2018 г.

**ПРОГРАММА  
УЧАСТИЯ РКЦ В ПРОТИВОАВАРИЙНОЙ ТРЕНИРОВКЕ  
НА АЭС БУШЕР  
3 октября 2018 года**

**Тема: «Противоаварийная тренировка на АЭС Бушер (Иран)»**

Москва 2018