

**From:** Gordon Fowler, *IF*  
**To:** Andrew Persinko, Barry Mendelsohn, Barry Zalcman...  
**Date:** Fri, Dec 1, 2000 8:18 AM  
**Subject:** SCHEDULE FOR GAN MEETING

Attached are the latest schedule for the meetings with GAN next week and the proposed Memorandum of Meeting (MOM) prepared by GAN. (To open the MOM, first "save as" a new file to WP, and open in WP).

- The schedule has changed somewhat from the original you received on November 27, so please review it carefully. Additional changes will be difficult to accommodate.
- The proposed MOM will serve as the agenda for the discussions. In the interest of saving time, I have not incorporated the inputs I received from NRC staff. However, these should be used during the discussions and incorporated in the final MOM as appropriate.

As I mentioned before, please be prepared to draft your portion of the meeting results as they occur and send to me by e-mail. I will update the MOM as the week progresses, obtain the necessary reviews and hopefully be ready for signing by 2:30 Friday, December 8.

All recipients of this message and their management are cordially invited to the buffet lunch, scheduled for Tuesday, December 5 and the the signing ceremony on Friday.

- Gordon

**CC:** A. Vicky Lewis, Donna-Marie Perez, Elizabeth Dor...

*A/S*

# **MATERIALS FOR DISCUSSIN DURING ANNUAL MEETING BETWEEN US NRC ANF GOSATOMNADZOR OF RUSSIA IN DECEMBER 2000**

## **LEGAL BASIS**

### **Results to date:**

NRC legal specialists reviewed draft law "On management of Radioactive waste" and draft law on nuclear liability and provided their comments on these drafts.

The specialists of Gosatomnadzor of Russia use these comments in discussions of the draft laws within the working groups of the State Duma.

The Federal Law "On Administrative Responsibility of Organizations for Violations of Legislation in the Use of Nuclear Energy" (N 68-FZ) was adopted by the State Duma on 14 April 2000 and signed by the President of the Russian Federation on 12 May 2000. This Law is a legislative basis for Gosatomnadzor's activities for establishing of the system and regulatory documents on sanctions and enforcement. The Russian version of the Law was handed over to the NRC representatives in September 2000.

### **Future activities:**

NRC and Russian specialists will continue to communicate on issues related to the development of a legal framework for nuclear regulation in Russia. In particular, Gosatomnadzor's specialists will provide information regarding the status of draft Russian laws under development and provide copies as appropriate. At the request of Gosatomnadzor of Russia, NRC legal specialist will review draft laws provided by Gosatomnadzor of Russia and provide comments for consideration of Gosatomnadzor's specialists in developing subsequent version of draft Russian laws.

Familiarization of RF Gosatomnadzor's staff with a system of sanctions and enforcement applied by NRC, consultations of RF Gosatomnadzor in development of the regulatory documents in the area of sanctions and enforcement.

## **REGULATORY ACTIVITIES**

### **Licensing of nuclear installations (NPPs and RRs)**

#### **Results**

Workshop on licensing of digital microprocessor-based instrumentation and control systems applied to NPPs was conducted in Moscow from November 27 through December 02 2000 for the RF Gosatomnadzor staff and other nuclear safety related institutes.

#### **Previously approved plans**

It is planned that future cooperative activities will be conducted according to the same "partnering" model that has already been used for preparation of two workshops. The present model encourages the active participation of RF Gosatomnadzor specialists during the work development meetings at the NRC in partnership with NRC staff to determine the level of detail of consultation needed for the activity, the background of the targeted audience, and particular topics for emphasis. The target areas of consideration include reactor projects, technical specifications, plant change and modification process (10 CFR 50.59), how to apply new standards to currently operating plants (technical and environmental), maintenance and quality assurance and materials and plant equipment aging.

Licensing Reviews for previously Operating Plants/Modernization, Amendment Screening and Plant Design and Equipment changes (RF Gosatomnadzor in the US and NRC in Russia). Some words from the previous MOM.

Specific issues to plan work in this area:

1. Licensing of Modifications at NPPs, use of the PSA results in this process.
2. Methods and procedures for review and analysis of NPP equipment (components) compliance with regulatory requirements for materials, welds, inspection techniques, strength, diagnostics, etc. on the basis of NUREG 800 and others.
3. Methods and Procedures for certification of NPP designs including certification of equipment and technology according to CFR 52.

#### **New Proposals**

NRC assistance in implementation of the independent review of materials on In-depth safety assessment for Novovoronezh 3, Leningrad 2 and Kola 2, which are developed within projects implemented under financial support of DOE. ***(It is necessary to hear from NRC what type of assistance its staff can provide).***

#### **Oversight**

## **Reactor Inspections**

### **Results to date**

No

### **Previously Approved Plans**

Consultation on RF Gosatomnadzor Research Reactor Inspection Program. Participation of NRC staff in inspection of a research facility in Moscow Region as observers.

### **New Proposals**

Workshop on familiarization and discussion of the NRC new risk-informed inspection program. This workshop should be co-ordinated with IAEA workshop on the same issues which is planned for 2001 within regional program of technical cooperation and NRC is going to host this workshop.

On the basis of the this workshop Gosatomnadzor of Russia will consider a necessity to make changes in a set of the inspection procedures and comprehensive regulatory document. (Some words from the previous MOM).

**Materials and Material Control, Protection and Accounting are the same just to change the year**

## **ANALYTICAL TECHNIQUES AND METHODS**

### **PRA studies**

#### **Results and Plans**

According to the agreement reached during the annual meeting of NRC and Gosatomnadzor representatives in December 1999 the four-week working session was conducted at BNL in March-April 2000. Russian members of the project and NRC experts participated in its work. The computerized probability model of the first level for the internal initiating events for Kalinin 1 was completed during this session. At the same time the project technical documentation relating to 1 level PSA for internal initiating events (the main report and a set of the annexes), analysis of fires, floods and earthquakes (reports on each subject) was completed. All documents were developed in Russian and then most of them were translated into English and sent to NRC. Translation of the rest documents into English was finished in summer and they also have been sent to NRC.

In 12-14 September 2000 the meeting of Project Administrators from all 6 Russian participating organizations and NRC was held in Moscow. The results of work during 1997-2000 were summarized. Both a working schedule up to June 2001 and proposals for the working program for the period from June 2001 through September 2002 (deadline of the project completion) were developed.

The main tasks up to June 2001 are:

- Completion of the work for development of the project documentation both in Russian and English (mainly comparison of the texts and editing of the English versions), their publication;
- Implementation of the initial phase of PSA level 2;
- Development of proposals for the program describing how to use PSA results in the regulatory activities and identification of the NRC assistance areas directed to support Gosatomnadzor of Russia in implementation of such a program.

The work under the mentioned tasks should be started after signing of Amendments to the acting agreements with NRC by all organizations involved in the Project. The precaution for this is receiving of the necessary budget by the NRC.

#### **Operational Data Feedback (as it was before).**

#### **Uses of Analytical Simulators**

##### **Results to date**

The project for development and delivery of AS to Gosatomnadzor of Russia was completed by delivery of the AS for NPP with RBMK-1000 to the North-European Regional Office of Gosatomnadzor of Russia. The software for

this model was also installed in 2000 on ASs located in Don Regional Office and HQ.

The following activities were implemented by SEC NRS staff within the program on technical support to Gosatomnadzor of Russia in introduction and use of the different analytical simulators of NPP units to train personnel, emergency mode modeling, event analysis and safety assessment:

- Modeling of NPP operational modes for VVER-1000, including modes of normal operation with switching off and on of the major equipment and control systems and emergency modes according to the list of the design basis accidents.
- Computation and analysis of transients for the unit with VVER-1000 under incidents including analysis of the major equipment and control systems performance.
- The report on the results of this should will be issued at the end of 2000.

LAN of the AS was updated in 2000. The faulty equipment of the AS and ERC was repair or replaced. LANs of AS and ERC were connected to each other which will provide data transfer between AS and ERC premises where safety status is analyzed. This together with the software to be developed will allow Gosatomnadzor to use AS as a tool for experts during emergency exercises and actual incidents.

One monitor was repaired and sent to Don Regional Office, the new one was installed on AS in HQ. A new reserve tape recorder was purchased for AS. The ERC equipment was also repaired under the signed contract, namely copy machine, 2 overheads and multimedia projector.

### **Proposals for 2001**

The following activities are suggested for cooperation in the use of analytical simulators for the expert evaluations of NPP safety, prompt safety analysis in case of incidents occurring at Russian operating NPPs and as a part of the Gosatomnadzor' emergency response system:

- Development of VVER software (Kola 3 model).
- The software of VVER-1000 and RBMK-1000 Ass should be improved by introduction of the math model for Safety Parameters Display System, which Russian NPPs are equipped with.
- Further improvement of VVER-1000 AS by development of the math model for radioactivity transport inside NPP premises, radioactive releases and radiation situation within the buffer area in case of NPP accidents.
- Upgrade of the RBMK-1000 software to reflect the current core design ( now the AS model reflects the reactor core design for 1998).
- Continuation of the Contractor support to the software of AS with VVER-1000 and RBMK-1000 after completion of the warrancy period.

## **EMERGENCY RESPONSE AND CONTINGENCY PLANNING**

### **Results to date**

Financing which was allocated for works in this area was used to implement previously planned task, namely "Creation of the GIS for ERC of Gosatomnadzor of Russia".

This work is the logical continuation of the activities for development of GIS started in 1999. The main task for 2000 was to improve GIS to display and present data on NPPs. The following works have been done by the II&IPD and IBRAE RAN:

- The structure of data and a format of their presentation were developed;
- The software of the overview GIS was improved;
- Data on the detail layouts of the Balakovo NPP site and buffer area were introduced electronically as well as information on technical parameters of the reactor installations and safety systems of Balakovo NPP and diagrams of the radiation monitoring posts and evacuation ways;
- Information on executive and legislative authorities of Saratov Region.

### **Proposals for 2001**

There is a proposal to continue implementation of activities from the Working Plan. The following tasks have the highest priority:

- Fiber optic channel of communications to connect Gosatomnadzor to the interagency channel and arrangement of information exchange with Crisis Center of Rosenergoatom and Crisis Center of Minatom and other Ministries and organizations involved into the Russian Emergency Response System;
- Installation of software to calculate transport of radioactive release and dose burdens;
- Upgrade of computer hardware for ERC for its compliance with the requirements of the modern software.

### **Additional Issues:**

*Implementing Agreement should be prolonged  
The Working Plan is to revised.*

## **INFRASTRUCTURE**

**Professional Training (as it was before).**

**ANNUAL MEETING WITH  
NUCLEAR REGULATORY AUTHORITY OF RUSSIA  
DECEMBER 4-8, 2000**

**DELEGATION:**

Federal Nuclear and Radiation Safety Authority (Gosatomnadzor - GAN)

Alexander Gutsalov, First Deputy Chairman

Alexander Matveev, Director, Science and Technical Department

Andre Vistgov, Director, Inter-regional Information Center

Irina Sokolova, International Relations Officer

State Department Interpreters:

Galina Holmes

Nicholas Berkoff

**SCHEDULE:****Monday, DECEMBER 4**

8:45            Commissioner Merrifield  
9:30            EDO William Travers  
10:15          Chairman Meserve  
11:00          Commissioner Dicus  
11:30          OIP Janice Dunn Lee

12:00          Lunch

**(Rm. O-4B6)**

1:00 - 2:15

**Regulatory Activities:**

- Licensing - NPPs
- Oversight & Inspections: Inspection Bases and Implementation  
(NRR: Lee Banic, Barry Zalcmn)

2:30 - 3:00

**Legal Basis: Legislation**

(OGC: Stu Treby, James Lieberman)

3:00 - 3:30

**Regulatory Activities:**

- Oversight & Inspections: Enforcement  
(OE: Bill Borchardt, OGC: Jim Lieberman)

3:30 - 4:30

- Licensing - Fuel Cycle  
(NMSS: Barry Mendelsohn)
- Licensing - Nuclear Materials
- Non-Fissile  
(NMSS: Barry Mendelsohn)

**Tuesday, DECEMBER 5****(Rm. O-4B6)**

9:00-9:30

**Regulatory Activities:**

- Fissile: MPC&A  
(NMSS: Mike Kelly)

9:30-10:45

- Fissile: Mixed Oxide Fuel  
(NMSS: Drew Persinko)

11:00-11:30

Commissioner Diaz

11:30-12:00

Commissioner McGaffigan

12:30-2:00

Lunch hosted by Commission  
(Commission Dining Room, 18<sup>th</sup> Floor)

2:15-4:30

**Analytical Techniques and Methods to Support Regulatory Activities**

- Codes
- PRA Studies (Kalinin)  
(RES: Tom King, Mary Drouin, John Lane)

**Wednesday, DECEMBER 6****(Rm. O-4B6)**

9:00-10:30

**Analytical Techniques and Methods to Support Regulatory Activities**

- Uses of Analytical Simulators  
(RES: Farouk Eltawila, Sher Bahadur)

**Infrastructure**

- Training
- Communications  
(Joe Himes: IRO; W. Beecher; OCIO: Jim Shields, Walt Oliu)
- Data bases
- Hardware upgrades

11:30-1:30

- Lunch

1:30-3:00

**Emergency Response & Contingency Planning**

(IRO: Joe Himes)

**Thursday, DECEMBER 7****(Rm. O-4B6)**

10:00-12:00

- Additional program discussion
- Review and revise Memorandum of Meeting

**(Commission Conference Room, 1<sup>st</sup> Floor OWFN)**

1:30-4:30

**Interagency discussion**

**Friday, DECEMBER 8**

**(Rm. O-4B6)**

8:30-1:30 - Review and revise Memorandum of Meeting

**(18<sup>TH</sup> Floor Conference Room)**

2:30 - Principals sign Memorandum of Meeting  
(W. Travers, A. Gutsalov)