

MAY 02 1994

MEMORANDUM FOR: Eric S. Beckjord, Director  
Office of Nuclear Regulatory Research

FROM: C. J. Heltemes, Jr., Deputy Director  
for Generic Issues & Rulemaking  
Office of Nuclear Regulatory Research

SUBJECT: SUMMARY DISCUSSION OF THE IAEA NUSSAG MEETING  
IAEA - APRIL 18-21, 1994

The Nuclear Safety Standards Advisory Group (NUSSAG) met on April 18-21, 1994, at the IAEA, in Vienna, Austria. NUSSAG members are appointed for a 3-year term, and thus, each 3 years a new Advisory Group is formed with a number of new countries and members. This was the first meeting for the new NUSSAG, and a total of 20 participants from 16 countries attended (plus three observers from Japan). The agenda (Enclosure 1) and a list of participants (Enclosure 2) are enclosed. Agenda item 2 will be included in a separate trip report by Marge Mahy, IP. The Chairman's report of the meeting is provided as Enclosure 3. Summary highlights from the meeting are discussed below.

1. Overview Remarks

Morris Rosen opened the meeting noting the following points:

(a) There is a growing trend toward increased international cooperation. The Nuclear Safety Convention reflects that trend, and a revitalized NUSSAG is expected to play an important role in getting increased cooperation on standards and peer review discussions.

(b) The future of Chernobyl would be discussed on Thursday and Friday. The decision to shut down these plants at the end of 1993 was revoked in October 1993. The Director General (DG) has written several letters expressing concerns about the continual loss of qualified operating staff (20% loss in 1993 and continued losses in 1994); the move away from the use of Russian and the effect on procedures; continued safety problems, e.g., deficient ECCS and fire protection, lack of separation and diversity, control room habitability, and steam lines directly over the control room; continued use of 2% enriched fuel; and the severe economic crisis and the impact on procurement of spare parts and up-to-date equipment.

(c) Armenia is planning to restart at least one reactor and is requesting assistance from IAEA. IAEA sent a team to study the plants in August 1993. The IAEA team conclusions reenforced the EDF/Framatone team conclusion that the plants could be restarted. A significant effort over several years will be necessary on inspection, seismic analysis, training, and development of procedures. Armenia has evidently signed an agreement with Russia for technical assistance and fuel that will cost about \$100M. How this will be paid for is uncertain since the country has little or no hard currency. IAEA

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will provide assistance for restart even though the G-7 countries are not in favor of restart. Financing discussions are underway for a restart as early as next year.

(d) The International Nuclear Safety Convention is an important step toward international cooperation and is proceeding on a schedule permitting it to be open for signature at the September General Conference. It was noted that IAEA will be the Secretariat and will be involved in the meetings of the parties. A task that needs to be performed is a review of the national reports to ensure consistency and completeness, i.e., to ensure all aspects are reasonably covered. The agency could carry out this task (the resource implications were not noted). A decision on how this task will be conducted needs to be made either at the Diplomatic Conference or at the first preparatory conference for the first meeting of the parties.

(e) The Paris Conference of Radiation Effects will be important for explaining radiation risks to the public and media. No papers will be presented. The first day and a half will be devoted to a general discussion followed by another day and a half spent on case studies covering weapons, radon, waste, and Chernobyl.

(f) The situation on increased thyroid cancer in Ukraine, Belarus, and Russia continues under review. About 300 cases have been identified so far, and, although it is likely that the increase in childhood cancers are probably due to radiation effects, this has not been confirmed because of a number of other factors present.

(g) Work continues on VVER/RBMK studies and much documentation is available - there is a growing international consensus of needed safety improvement and providing assistance in implementation.

(h) IAEA may become involved with a new test ban treaty because of its broad experience in administrative aspects and in inspection, verification, and handling of data. Although knowledge of seismic aspects and atmospheric monitoring are limited, the agency is being supported for this role by many individuals (others believe a separate organization may be best).

(i) The MIT thesis on Chernobyl is under review (indicating that some 250 million curies rather than 50 million curies were released at Chernobyl and that most of the core is not where it is expected). The analysis seems reasonable to IAEA, particularly the question of the core. (A recent video is available showing lava-like flow in steam lines indicating that very little of the reactor is left.)

(j) High availability is not representative of safety. Chernobyl had availability in the range of 80-85% indicating that many short shutdowns were involved rather than long maintenance outages necessary to address plant conditions such as aging. Also it was noted that the surveillance program at Chernobyl had been ineffective over a number of years.

## 2. New Terms of Reference

The DG issued new Terms of Reference (TOR) for the reconstituted NUSSAG (Enclosure 4). These TOR make clear for the first time that NUSSAG is tasked to advise the DG "... in the field of regulatory issues and standards for nuclear safety relevant to civil nuclear power and research reactors." Of the five functions given to NUSSAG, three are devoted to IAEA standards development and implementation, and two are directed to safety issues and programs relevant to regulatory process and experience. Although similar to the previous TOR, the new version clearly highlights the regulatory aspects; expands the role of NUSSAG to all safety standards not just NUSS standards; and expands the scope of NUSSAG to include research reactors for the first time. Further, the TOR emphasizes and clarifies that NUSSAG membership is to consist of "...high level active nuclear safety regulatory executives." Overall, the new TOR implement essentially all the recommendations contained in the consultants' reports (by Reed and Heltemes) issued in January 1993.

## 3. Way Ahead

This meeting of NUSSAG was basically an organizational meeting to decide on how to implement the new TOR and specifically how to advise on NUSS and regulatory aspects. In order to help guide this discussion, I presented a summary of NUSSAG history and actions to define NUSSAG objectives and options for the future. The outline for these remarks is enclosed (Enclosure 5).

In this regard, it was agreed that:

- (a) Initiatives by NUSSAG should generally consist of NUSSAG reports or guides containing evaluations and assessments of safety programs or regulatory practices, examples of good practices, and reviews providing direction for new or revised NUSS documents.
- (b) What has been done and is being done needs to be carefully explored before attempting a NUSSAG initiative in order to avoid unnecessary duplication.
- (c) A task group on the NUSS program was formed to assess status and plans for developing new and revised NUSS documents, including usage of current documents, problems of inconsistency or gaps in coverage, and priorities for action. Mr. Versteeg (Netherlands) was appointed the leader of this group assisted by representatives from Argentina, Canada, Finland, Hungary, Mexico, Russia, and the UK.
- (d) A task group on regulatory practices was formed to address regulatory tools and to feedback the lessons from such IAEA programs as OSART, ASSET, ASCOT and IRRT. A number of proposals were discussed for consideration. Mr. Lacoste (France) was appointed leader, assisted by representatives from China, India, Japan, Sweden, and the US.

(e) The first task of each group will be to propose a scope of work for the next 3 years and then to identify specific tasks for the first year. A work plan from each group is due in July 1994 and agreement of NUSSAG is scheduled by September 1994.

(f) It was not considered useful or practical for NUSSAG to review and approve all final drafts of NUSS documents prior to submission to the DG or Board of Governors (BOG). Instead NUSSAG requested that final drafts be provided to NUSSAG, and if a concern or major problems were identified, NUSSAG could raise a formal objection.

(g) The Chairman wished to have a small NUSSAG bureau to discuss issues affecting NUSSAG and to approve studies to be undertaken. NUSSAG agreed to a four-person bureau consisting of Mr. Hammer, Mr. Versteeg, Mr. Lacoste, and myself.

#### 4. Regulatory Practice - Future Action

The schedule and actions to develop a work plan consists of the following steps:

(a) Each interested NUSSAG member is to provide concrete suggestions for needed regulatory documents within 10 days.

(b) A composite list will be circulated for comment 2 weeks later - each member is to address which items should be endorsed, which would be of interest for participation, and which would be of interest for the member to be the leader.

(c) The results of this survey and an extended outline or two-page summary would be provided to all NUSSAG members for comment by July 9.

(d) Approval for the initial tasks would be given by the bureau or NUSSAG in September 1994 and work would start immediately.

#### 5. IAEA Support of NUSSAG

Concerns were expressed by a number of NUSSAG members (informally) that the agency needed to provide stronger support to NUSSAG's activities and the related standards program. The following three specific aspects of this general concern were noted: (a) The most important part of this NUSSAG meeting was the discussions on the "way forward" - however, for much of this discussion no representative of IAEA management was in attendance to participate in or contribute to the discussion. (b) The materials provided prior to the meeting and at the meeting were not adequate to allow a comprehensive and in-depth review of the agency's standards activities. Material known to be available was requested and some but not all requests were acted upon. (c) When asked for the agency's plan and priorities for standards development, the agency stated "there was no plan" and asked NUSSAG to develop such a plan for "them."

## 6. International Standards

Annick Carnino reported that ISO wanted to establish a subcommittee on nuclear safety standards (in conjunction with ANS). There is an ISO meeting in April, and IAEA wished to provide a response. IAEA views this ISO initiative as in direct conflict and overlap with the standards of IAEA. Past agreements with ISO concluded that the two agencies would work in different areas; thus, this ISO initiative represents a change in attitude.

Comments by NUSSAG members indicated some differences between ISO and IAEA standards:

- (a) ISO standards can be adopted and published with agreement of 75% of interested parties; IAEA standards need agreement of all BOG countries.
- (b) ISO documents are to be used only between two parties (buyer and seller) and are not applicable as a general requirement in a regulatory environment; IAEA standards are general in nature and form the basis for the "safety" culture.
- (c) There probably is no way to stop ISO from proceeding; agency comments won't be influential with ISO.
- (d) It is highly unlikely if not impossible that IAEA standards would ever be endorsed by ISO without modification (because of different objectives and purposes); further ISO would always have the ability to revise IAEA standards if the IAEA standards enter ISO system.
- (e) If possible, agreements should be pursued where IAEA/ISO use identical terms and ISO works in a non-duplicative way, e.g., on the development of lower-level industrial standards providing implementation details for IAEA standards and guides.

The resolution of this item was that IAEA would write ISO indicating a number of concerns with the ISO initiative.

## 7. Additional Items

- (a) An NUSSAG agenda item involves a report from each member on the status of the principal issues and activities for his country. In order to improve the usefulness of this exchange, it was agreed that these reports would be provided several months in advance of the meeting. The Secretariat will distribute all reports to members for review before the next meeting.
- (b) A question was raised regarding the best format to document and feedback to a wide audience the lessons of experience and examples of good practice resulting from Regulatory Peer Reviews. There was strong support for publishing this information as a "Safety Practice" guide under the NUSS series. This would help ensure rapid identification of its existence and

MAY 02 1994

Eric S. Beckjord, Director

-6-

widespread dissemination. A final decision on this subject should result by action of the 4-person bureau or at the next NUSSAG meeting.

(c) The next NUSSAG meeting is tentatively scheduled for the week of March 20, 1995.

Should you wish any additional information or clarification, please let me know.

Original Signed By:  
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C. J. Heltemes, Jr., Deputy Director  
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Office of Nuclear Regulatory Research

cc: Jim Richardson, Vienna	K. Henderson, IP	E. Jordan, AEOD
J. Taylor, EDO	M. Mahy, IP	D. Ross, AEOD
J. Milhoan, EDO	M. Malsch, OGC	T. Speis, RES
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J. Blaha, EDO	F. Miraglia, NRR	R. Brady, ADM/SEC
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J. Shea, IP	G. Arlotto, NMSS	B. Thomas, DOE
M. Congdon, IP	PDR	

OFFICE: RES  
NAME: HELTEMES  
DATE: 4/3/94

RES File Code: RES-5B-2

1994-04-15

Meeting Room: C07IV

Opening: 9:30 a.m.

**AGENDA FOR SEVENTH NUSSAG MEETING**  
**18-20 April 1994**

1. Adoption of the agenda and Chairman's Introduction
2. Report by Secretariat on relevant activities (short presentations on NENS activities over the past 12 months and future planned work)
  - 2.1 NENS activities and G24 activities in Eastern Countries (M. Rosen)
  - 2.2 Basic Safety Standards (G. Webb)
  - 2.3 International Regulatory Review Teams (IRRT) and Regulatory Assistance programme (I.F. Crawford)
  - 2.4 Safety Culture (M. Dusic, A. Carnino)
  - 2.5 VVER RBMK (L. Lederman)
  - 2.6 OSART/ASSET mission highlights (K. Hide/B. Thomas)
  - 2.7 International Nuclear Safety Convention (A. Carnino\F. Flakus)
  - 2.8 INSAG (A. Karbassioun)
  - 2.9 Revision of QA Codes and Guides (N. Pieroni)
  - 2.10 Safety Series Review Committee programme of work on Safety Standards documents (A. Carnino)
3. Peer discussions on Regulatory Practices
  - 3.1 Current Topic  
The policy used for setting (and assessing) of regulatory safety goals (I.F. Crawford)
4. The way ahead (presentation on previous Consultant's Report)
  - 4.1 What does NUSSAG want to do - how should it go forward
  - 4.2 Recommendations from previous NUSSAG Consultants Group (Messrs. Heltemes and Reed)
  - 4.3 Setting up of NUSSAG sub groups
5. Identification of a logical way forward for planning the development of new, and revision of old codes and guides within the NUSS series (A. Carnino)

Suggested topics for new guides:

  - 5.1 Incident\Failure Reporting and Assessment Criteria
  - 5.2 Technical Content of SAR's
  - 5.3 Safety Culture Assessment
6. ISO/ANS - Information on plans for developing new international standards (A. Carnino)
7. Chairman's summary and next meeting

**Note:** NUSSAG members are requested to provide a brief written report on the highlights of their national activities and issues. These reports are not intended for verbal presentation, but will be given to each member for information purposes.



Department of Nuclear Energy and Safety  
Division of Nuclear Safety

Issue No. 4  
1994-04-19

### NOTIFICATION OF AN AGENCY SPONSORED MEETING

**Title of meeting:** Nuclear Safety Standards Advisory Group meeting (NUSSAG)

**Dates, inclusive:** 18-20 April 1994

**Responsible Officer:** I.F. Crawford,  
Rm. A2620, ext. 2726

**Secretary:** A. Charlesworth  
Rm. A2622, ext. 2670

**Place:** IAEA Headquarters, Meeting Room CO7IV, ext. 1341

PARTICIPANTS	ADDRESSES	PERIOD
<b>Argentina</b>		
Mr. P. Sajaroff	Atomic Energy Commission CNEA Av. del Libertador 8250 1429 Buenos Aires Tel: 541-704-1218 Fax: 541-703-2645; 704-1151	18-20 April
<b>Canada</b>		
Mr. P. Wigfull	Atomic Energy Control Board P.O. Box 1046 Ottawa, Ontario K1P 5S9 Tel: 613-995-5898 Fax: 613-995-5086	18-20 April
<b>China</b>		
Mr. Y. Lei	National Nuclear Safety Administration P.O. Box 8088 100088 Beijing Tel: 225-9198 Fax: 225-7804	18-20 April
<b>Finland</b>		
Mr. A. Vuorinen	Finnish Centre for Radiation and Nuclear Safety P.O. Box 14 SF-00881 Helsinki Tel: 358-0-759-88-200 Fax: 358-0-759-88-216	18-20 April



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PARTICIPANTS	ADDRESSES	PERIOD
<b>France</b>		
Mr. A.C. Lacoste	Ministère de l'Industrie 99 rue de Grenelle 75353 Paris Cédex 07 SP Tel: 43-19-32-17 Fax: 43-19-39-24	18-20 April
Ms. C. Feltin	Direction de la Sûreté des Installations Nucléaires CEN/FAR, BP no 6 92265 Fontenay aux Roses Cédex Tel.: (1) 46 54 96 51 Fax: (1) 42 53 69 04	18-20 April
<b>Germany</b>		
Mr. F.W. Krüger	Federal Office for Radiation Protection Aussenstelle Berlin Waldowallee 117 D-10318 Berlin Tel: 030-50922-821 Fax: 030-50922-800	18-20 April
<b>Hungary</b>		
Mr. Z. Szonyi	Nuclear Safety Inspectorate National Atomic Energy Commission P.O. Box 676 1539 Budapest 114 Tel: 361-155-0493 Fax: 361-155-7693	18-20 April

PARTICIPANTS	ADDRESSES	PERIOD
<b>India</b>		
Mr. A. Gopalakrishnan	Chairman, Atomic Energy Regulatory Board Vikram Sarabhai Bhavan Anushaktinagar Bombay 400 094 Tel: 556-2343 Fax: 556-2344	18-20 April
<b>Japan</b>		
Mr. Michio Ishikawa	Professor, Department of Nuclear Engineering University of Hokkaido W-8, N-13, Kita-ku Sapporo 060 Tel.: 011-706-6699 Fax.: 011-706-7842	18-20 April
Mr. K. Aizawa	Safety Engineering Division Power Reactor and Nuclear Fuel Development Corporation 4002, Narita, O-arai, Ibaraki 311-13 Tel: 81-292-67-4141 Fax: 81-292-67-7148	18-20 April
<b>Korea, Republic of</b>		
Mr. Kun-Woo Cho	Scientific Attaché Permanent Mission of the Republic of Korea to the IAEA Gregor-Mendel-Strasse 25 A-1180 Vienna Tel: 317 37 25-90 Fax. 317 85 63	
<b>Mexico</b>		
Mr. J.L. Delgado Guardado	Comisión Nacional de Seguridad Nuclear y Salvaguardias (CNSNS) Dr. Barragan No. 779 Col Vertiz Narvarte Delegacion Benito Juarez 03020 Mexico DF Tel: 590-75-08 Fax: 525-590-6103	18-20 April

PARTICIPANTS	ADDRESSES	PERIOD
<b>Netherlands</b>		
Mr. J. Versteeg	Nuclear Safety Department Ministry of Social Affairs and Employment P.O. Box 90804 2509 LV Den Haag Tel: 70-333-44-44 Fax: 70-333-40-18	18-20 April
<b>Russian Federation</b>		
Mr. O.M. Kovalevich	Gosatomogonadzor Science and Engineering Nuclear and Radiation Safety Centre Avtozavodsay 14/23 Moscow 109280 Tel: 055-275-16-94; 095-275-55-48 Fax: 095-278-80-90	18-20 April
Mr. G. M. Vladykov	Minatom, Institute of Physics and Power Technology Obnisk, Kaluga Region Tel: 08439-9-89-92	18-20 April
<b>Sweden</b>		
Mr. L. Hammar (Chairman)	Swedish Nuclear Power Inspectorate (SKI) P.O. Box 27106 S-10252 Stockholm Sweden Tel: 46-8-665-4491 Fax: 8-661-9086	18-20 April
<b>United Kingdom</b>		
Mr. S.A. Harbison	Nuclear Installations Inspectorate 1 Chepstow Place Westbourne Grove London W2 4TF Tel: 71-243-6850 Fax: 71-727-4116	18-20 April
Mr. R. D. Bye	As above Tel: 71-243-6864	18-20 April

PARTICIPANTS	ADDRESSES	PERIOD
<b>United States of America</b>		
Mr. C.J. Heltemes, Jr.	Office of Nuclear Regulatory Research U.S. Nuclear Regulatory Commission Washington D.C. 20555 Tel: 301-492-3720 Fax: 301-492-3597	18-20 April
<b>OBSERVERS</b>		
<b>Japan</b>		
Mr. N. Nonaka	Nuclear Safety Review Nuclear Safety Bureau Science and Technology Agency 2-2-1 Kasumigaseki, Chiyoda-ku Tokyo 100 Tel: 81-3-3581-2598 Fax: 81-3-3581-2487	18-20 April
Mr. Y. Koga	International Affairs on Nuclear Safety Ministry of International Trade and Industry 1-3-1 Kasumigaseki, Chiyoda-ku Tokyo 105 Tel: 81-3-3501-6289 Fax: 81-3-3581-8535	18-20 April
Mr. A. Higashi	Office of Nuclear Safety Planning Nuclear Power Engineering Corporation 17-1, 3 chome, Toranomon, Minato-ku Tokyo 105 Tel: 81-3-5470-5470 Fax: 81-3-5470-5487	18-20 April

ENCLOSURE 3

## SEVENTH NUSSAG MEETING, 18-20 April 1994

### CHAIRMAN'S SUMMARY OF THE MEETING RESULTS

The Way Ahead was considered by NUSSAG to be the most important point on the agenda and was paid attention to accordingly. These notes cover the accomplishments of the meeting on that issue.

#### *Interpretation of the Terms of reference*

The new Terms of Reference (TOR) were studied and discussed to ensure proper understanding and interpretation by all members of the reconstituted NUSSAG, which now met for the first time with nine new members present. It was noted that the new TOR continued to give emphasis to NUSS and other IAEA standards and included a requirement to give advice to IAEA on nuclear safety issues and programmes relevant to the regulatory process.

The understanding of NUSSAG is that the TOR leaves it to NUSSAG to determine the most effective way of directing advice to the IAEA. It was agreed that NUSSAG should not seek to approve individual NUSS documents before publication. It was concluded that NUSSAG should serve as a source of expert advice on regulatory matters, giving priority to providing guidance on the development, the coverage and the efficient implementation of the NUSS.

#### *Implementation of the Terms of Reference*

It was agreed that NUSSAG should aim to achieve:

- \* *A clear view* of the need for international guidance for establishing national rules and practices also considering the experience gained from implementations of such guidance
- \* *Promotion* of the conceptions of appropriate safety principles and practices present in the NUSSAG group
- \* *Adequate initiatives* on part of NUSSAG to establish the required bases for advice to be given

According to the TOR NUSSAG would expect to be regularly consulted in matters concerning following issues:

- \* Development plans for NUSS Codes and Guides and corresponding documents concerning the safety of nuclear research reactors
- \* Work status and planned initiatives of other IAEA advisory functions (e.g. INSAG, RADWASS, Technical Committees etc) in regard of general coordination and consistency of approaches

- \* The Regulatory Peer Discussions Programme: the topics to be chosen and the planned conduct of the discussions. (Results and conclusions to be fed back in the NUSSAG Programme)

In matters concerning following issues NUSSAG would, on the other hand, require to be kept informed and given opportunity to comment or to give advice:

- \* NUSS Codes and Guides in final drafts
- \* IAEA general plans and initiatives related to nuclear reactor safety
- \* IAEA activities related to the Nuclear Safety Convention and matters of its implementation
- \* Status of the Agency's OSART, ASSET and IRRT programmes, including development of conduct and important findings

#### *Measures to gain increased advantage of NUSSAG*

It was noted that NUSSAG, as a group, may not have provided leadership and monitoring of the NUSS development to the extent desired. The previous NUSSAG suggested that the profile of NUSSAG should be raised as could be achieved by means of actively contributing its views on regulatory issues in useful publications. It was agreed that doing so would put NUSSAG in a much better position to serve efficiently in its advisory role. At the same time it was realized that provisions would then have to be made in order to enable active work to be done within NUSSAG, i.e. either by its members or, under their full control and ownership, in their home organizations.

It was agreed that initiatives by NUSSAG to perform active work by itself should generally consist in preparation of State-Of-the-Art Reports, preferably named NUSSAG reports or guides, containing evaluations and assessments of safety programs or regulatory practices, examples of good practices and reviews aimed for assessing needs and preferred directions of proposed new or revised NUSS documents. A number of possible tasks had been listed in documents prepared for the meeting. Many of them, like *Assessing the safety of ageing reactors*, had previously been proposed by NUSSAG and many were already dealt with in several projects, in IAEA programmes as well as by other international bodies. It was agreed to be essential that the situation in regard of what has already been done is carefully explored before attempting an initiative by NUSSAG, in order to avoid unnecessary duplication.

The following was agreed in regard of the continued conduct of the NUSSAG programme with a view to providing for work to be done by NUSSAG as required:

- \* NUSSAG Task Groups to be formed as needed for the purpose of taking on tasks by NUSSAG initiatives;

- \* The Regulatory Peer Discussions Programme: the topics to be chosen and the planned conduct of the discussions. (Results and conclusions to be fed back in the NUSSAG Programme)

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- \* NUSSAG Task Groups to be formed as needed for the purpose of taking on tasks by NUSSAG initiatives;



- \* NUSSAG Members to commit themselves, to the extent it may be arranged, to take part in the work of selected task groups, either personally or by appointing staff in their home organizations;
- \* NUSSAG Members to be appointed for taking on responsibility as Leaders for the Task Groups;
- \* A working plan for selected tasks with high priority to be established for each Task Group within the constraints of available resources. Any task undertaken should be preceded by a Pilot Task Study to explore all factors important to resolving the task efficiently, as the availability of results from previous programmes or other programmes in progress, the availability of required expertise in Members home organizations, and the availability of support as may be necessary from the IAEA;
- \* Task group members in different Member states to work separately for most of the time, communicating by fax, and having meetings as required (within budgetary constraints);
- \* Working material (draft reports, draft SOARs, proposals for actions etc) to be distributed to NUSSAG in advance of its meetings;
- \* The Regulatory Peer Discussions Programme to be used by NUSSAG for the purpose of contributing to resolving NUSSAG Tasks;
- \* A NUSSAG Planning Group to be formed by the Chairman and selected NUSSAG Members, including Members who are Task Group Leaders. The Group prepares, in cooperation with the IAEA Technical Secretary, the agenda for the NUSSAG meetings and prepare draft proposals to be discussed. It further serves for approving Pilot Task Studies on behalf of NUSSAG in order to pursue active work between the NUSSAG meetings.

### *NUSSAG Task Groups*

It was further agreed to form following Task Groups:

*Task Group on the NUSS programme* to be primarily concerned with reviewing the status and the plans for developing new and revising existing NUSS documents, including documents concerning research reactors and to propose such plans. It was noted that the task would have to include reviewing of the present situation in regard of the usage of the documents in practice, problems encountered in their use, lacking coverage etc.

*Task Group on Regulatory Practices* to be concerned with the development and the use in practice of the regulatory tools realizing that due consideration of the balance is required in order to achieve effectiveness and to emphasize building on the competence and the responsibility of the licensees. It was noted that the important factors include the development of safety goals and objectives, the development of systematic methods for field inspections to identify root factors essential to safety, and the promotion of the

capability of organizations to effect learning from experience. It was further noted that valuable input for the task could be obtained from IAEA programmes like OSART, ASSET, ASCOT and IRR. There would be an option available for the Group to take on comprehensive evaluation of the results obtained from such programmes with a view to provide NUSSAG advice on their development. Another example of a task could be to review the current status in regard of the reliability of safety related software with a view to develop a guide.

It was made understood that the first task of each of the Task Groups would be 1) to propose the scope of its work in terms of issues to be covered during a period of three years and 2) to propose specific tasks for the first year. The output of the task groups would be expected to be NUSSAG reports. Work aimed at giving advice to IAEA on particular items would be reported in memos

#### *Working plan*

The Task Groups to report in writing to NUSSAG by July 1994. The NUSSAG Planning Group to endorse the proposals on behalf of NUSSAG, taking into consideration any comments from NUSSAG members by September, 1994, allowing actual work to commence.

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NUSSAG members view the full time participation of the Head of the Safety Standards and Coordination Section in their meeting, when questions about the NUSSAG programme are discussed, to be absolutely essential to the Group's effective working. IAEA Management should ensure that such uninterrupted presence is made available to NUSSAG.

1994-04-18

NUSSAG MEMBERS - (1994-1996)

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**NEW TERMS OF REFERENCE**  
**Nuclear Safety Standards Advisory Group**

(1) The Nuclear Safety Standards Advisory Group (NUSSAG) is a standing group of senior nuclear safety regulatory officials tasked with advising the Director General of the International Atomic Energy Agency in the field of regulatory issues and standards for nuclear safety relevant to civil nuclear power and research reactors.

**Functions**

- (2) The functions of NUSSAG are:
- (a) to give guidance to the IAEA on the continued development of the Nuclear Safety Standards (NUSS) programme and the formulation and development of related IAEA standards;
  - (b) to review and propose plans for revising NUSS documents in support of international agreements and other recognized and accepted practices;
  - (c) to propose and advise IAEA on the implementation of NUSS and the establishment and implementation of other relevant IAEA standards;
  - (d) to give advice to the IAEA on nuclear safety issues and programmes relevant to the regulatory process;
  - (e) to promote consensus advice based on regulatory experience.

**Membership**

(3) Following a request by IAEA to Member States for nominations the members of NUSSAG are appointed by the Director General. The major criterion for selection is that the member shall be a high level active nuclear safety regulatory executive. Consideration is given by the Director General to ensure that a balance of experience and approaches of different regions is represented. In the absence of the nominee a previously nominated 'advisor' may participate as an alternate member.

(4) The initial appointment by the Director General is for three years. The Director of the Division of Nuclear Safety, or nominated representative, may participate in all meetings.

(5) NUSSAG may be assisted by task groups to progress specific issues. The experts to serve on such groups and their terms of reference are proposed by NUSSAG.

**Chairmanship**

(6) The Director General appoints one of the NUSSAG members as chairman.

**Secretariat and Administrative Support**

(7) The IAEA provides the Scientific Secretariat and administrative services.

(8) The travel and living expenses of the participants in NUSSAG activities are, in general, borne by their respective Member State.

**Meetings**

(9) Meetings of NUSSAG are called by the Scientific Secretary after consultation with the Chairman of NUSSAG. These meetings will normally take place once a year, for up to five working days.

(10) Task group meetings take place on a schedule agreed by NUSSAG.

(11) Meetings of NUSSAG are normally conducted in English.

J. Heltemes  
April 19, 1994

Comments and Perspectives  
Nuclear Safety Standards Advisory Group (NUSSAG)

o History

- Proposed in 1985 to give advice on the NUSS program
- First meeting was in March 1988 - Purpose was to
  - provide overview on NUSS program
  - advise DG on NUSS implementation
  - review agency's plan for revision of codes and guides
  - review procedure for development of new codes and guides
  - review implementation experience and programs
- The general focus and terms of reference was unaltered 1988-1991
- NUSSAG in May 1992 suggested that a new direction of NUSSAG be considered
  - advice on NUSS program should continue to be provided
  - NUSSAG profile on NUSS leadership should be raised
  - new areas for NUSSAG should be considered
    - good regulatory approaches and practices should be published
    - 1991 Safety Conference recommendations should be explored
- NUSSAG in April 1993 endorsed the role of NUSSAG as a source of expert advice on regulatory matters, including
  - NUSSAG agenda should include regulatory topics
  - NUSSAG views should be published as Guide or Code
  - Unnecessary duplication with other groups should be avoided, e.g. if NEA resolves an issue technically then IAEA could codify in a standard
  - NUSSAG should decide on how best to consolidate and disseminate Regulatory Peer Discussions
  - Results of OSART, ASSET and IRRT missions should be reviewed by NUSSAG for incorporation into NUSS documents
- Distinguishing feature of NUSSAG is that it is a forum for senior, active nuclear safety regulators
  - yet NUSSAG has not provided "...advise to the IAEA on nuclear safety issues and programs relevant to the regulatory process" or "consensus advise based on regulatory experience." (per Terms of Reference)
  - the focus on almost exclusively has been on NUSS

o Current Situation

- In past NUSSAG provided leadership on NUSS documents
  - overview all documents being proposed
  - recommended priorities on development/new document
  - review/approve documents prior to BOG/DG
- Now NUSS documents can apparently be developed, approved and issued without NUSSAG involvement or knowledge



- Present agenda and background documents do not provide for a real overview or direction
- Further, with regard to NUSS documents -- the overview and direction is an important function -- but present situation is quite different
  - since very few plants are being built -- advice on design, construction or commissioning will have little impact
  - there is a solid foundation of IAEA codes and standards covering design, siting, operations and QA
  - there is well over 400 commercial operating nuclear plants
  - the safety of these plants is vital
  - thus to have real impact there is need to focus on operations related and regulatory aspects
  - further, there are a number of new regulatory authorities that may be in need of specific assistance
- In the past, NUSSAG believed that the agency had not made the best possible use of the vast regulatory experience of NUSSAG members -- for example the agency's medium-term plan 1993-1998 made no mention of NUSSAG
  - NUSSAG little known for NUSS activities
  - NUSSAG recognized for its fundamental document
  - INSAG widely known for its six reports -- reprints reflecting comprehensive and thoughtful analysis of topical areas
- For NUSSAG to have impact in terms of a meaningful, useful contribution -- a new direction may be appropriate
- The study that was completed in January 1993 by Jim Reed and myself recommended that NUSSAG expand beyond NUSS and focus on documents needed and to be used by regulators

o Role and Output of NUSSAG

- Question 1

How does NUSSAG wish to implement its Terms of Reference with regard to

- guidance on development of new NUSS documents
- need for revised NUSS documents
- implementation of NUSS documents?

- Question 2

- How does NUSSAG wish to provide advice on nuclear safety issues and programs relevant to the regulatory process?

- Question 3

- How does NUSSAG wish to address non-NUSS standards given the new Terms of Reference -- particularly research reactors and standards other than NUSS, e.g. Radiation Protection Standards?

## NUSS Related Activities

### o Terms of Reference

- Provide guidance on continued development of NUSS program
- Review and propose plan for revising NUSS document
- Advise on the implementation of NUSS

### o Anticipated NUSS Function

#### ● Overview

- Review the current status of and plans for NUSS documents
  - issued
  - under development
  - proposed
- Review the current status of related documents within the agency or other organizations
  - radiation protection
  - advanced reactors
  - radioactive waste management
- Review the lessons of experience and needs
  - OSART
  - ASSET
  - IRRT
  - Regulatory Peer Discussions
  - Member Country
- Agency policies and procedures covering development review and approval of NUSS document
- Agency resources available to be applied to the development of NUSS documents

### o Guidance

- Identify documents that need to be developed
- Identify documents that should be revised
- Recommend priority on documents and schedule targets in light of agency budgets
- Recommend program objectives and direction
- Recommend policy or procedure revisions

### o Action

- Review and approval/acceptance NUSS documents before BOG/DG approval
- Eliminate/minimize duplication of documents
- Feedback experience of member country in terms of: need for documents; content of documents; and clarity and usefulness of document

o Regulatory Perspective

- NUSSAG is in an unique position - it is a body of senior regulators
  - it meets routinely - it has in its charter to discuss issues of importance to regulators and the regulatory process - it has access to a wide body of information from many countries and from agency activities - its function is to produce needed, high quality products
    - no other organization has this makeup, capability and function - there is no duplication
    - all regulatory authorities are short on resources and can benefit from the combined talents in NUSSAG
    - some regulators are fairly new and could use accepted international documents
- There are many topics that could be considered and prioritized
  - Our agenda provides several examples
    - incident/failure reporting and assessment criteria
      - what events should be reported to the regulatory body
      - how those events should be analyzed and lessons determined
      - which events warrant on-site evaluation and methods for conducting such investigations
    - Safety Culture Assessment
      - how should a regulatory authority calibrate and assess whether there is (a) state of mind focused on safety (b) a disciplined approach to operations (c) a sound basis for decisions and (d) a rigorous self-examination
  - Other examples were listed in our consultants report
    - guidance on the applicability of prescriptive vs. performance based regulations,
    - guidance on developing risk-based regulations,
    - guidance on role of the regulator in communicating with the public
    - development of measures to assess the safety of nuclear plants and the effectiveness of regulatory actions,
    - development of safety goals and objectives,
    - guidance on the methods for the regulator to define and feedback the lessons of experience, and
    - development of methods and approaches for the setting of priorities and for making backfitting decisions
  - The regulatory Peer Review discussion OSART and ASSET feedback and other agency activities could be documented as useful guidance as NUSS or NUSSAG documents good practices
    - inspection and enforcement
    - assessment of aging
    - setting and assessing safety goals and criteria

- If NUSSAG wishes to emphasize a new direction, two courses of action, and perhaps others should be considered
    - Request the agency to develop the document
    - Prepare documents using NUSSAG members and talent with agency support
  - Suggested approach would be to select only one topic per meeting - provide for mid year review by a subcommittee - and a full NUSSAG review at next meeting and subsequent publication
  - A comprehensive and useful set of documents would result
- o Other parts of our report deal with other aspects
- coordination with OECD-NEA CNRA
  - need for definitive agency guideline on format, content and usage of terms for IAEA codes, guides and practices
  - review of NUSS implementation guidance
  - coordination with other standard organizations