NUCLEAR ENERGY AGENCY

Committee on Nuclear Regulatory Activities
Working Group on Operating Experiences

SUMMARY RECORD OF THE FOURTH MEETING

Held from 5th to 7th November 2008 at the OECH Headquarters, Paris, France
Highlights and Summary Record

4th Meeting of the CNRA Working Group on Operating Experience (WGOE)

The fourth (4th) meeting of the Working Group on Operating Experience (WGOE) took place from the 5th to the 7th of November 2008 at OECD Headquarters, 2 rue André Pascal, Paris, France. The following is a summary record of the meeting. All presentations and papers distributed at the meeting will be made available to participants on a CD Rom and will be posted in the WGOE member’s area of the NEA web site. Additional copies (to NEA Members) are available upon request to the Secretariat. A list of the participants is included as Appendix A.

Highlights

1. **Opening** - The Chair, Kulvinder McDonald welcomed members and provided some views on the way forward. Mr. Kaufer provided an overview of recent NEA and CNRA activities.

2. **Summary Record** of 3rd WGOE meeting [NEA/SEN/NRA/WGOE(2008)1] was approved.

3. **WGOE Interaction with CSNI**

   3.1. **CSNI Expectations** - Mr. Lothar Hahn, Chair of CSNI made a special presentation on CSNI expectations relating to Operating Experience.

   3.2. **WGHOF Developments** – Dr. Craig Reiersen provided a presentation on recent and planned activities. This included request for cooperation from WGOE in current task on Identifying and Overcoming Barriers to Effective Consideration of Human and Organizational Factors in Event Analysis and Root Cause Analysis.

   3.3. **WGFCs Developments** - The Secretariat provided a brief report on the results of the recent meeting of CSNI/WGFCs.

4. **Improving International Operating Experience Feedback (IOEF)** – WGOE Members reviewed the IOEF Actions Table based on the IOEF recommendations.

5. **Safety Analysis of Fire Operating Events** – WGOE members agreed to Task Group proposal to finalise the report and present to CNRA for approval at its December meeting.

6. **Coordination with other CNRA Groups** – The Chair reported on recent communication with Chairs of other CNRA working Groups.

7. **Exchange of Information**

    7.1. A round table was held in which WGOE members reviewed their actions in order to establish an international perspective on the safety significance on several pre-selected events. The events selected were: Japan (Steam Generator Hot Leg Nozzle Cracks); US (Gas Accumulation in Emergency Core Cooling, Decay Heat Removal and Containment Spray Systems and France (Steam Generator Clogging).
7.2. This was followed by a second round table to provide information on additional regulatory practices and methodologies applied in the assessment and utilisation of OE related to events that had occurred in the past cycle. Based on the round tables, potential requests to the CNRA (regulatory issues) and the CSNI (technical issues) from these discussions were as follows:

- Several regulators made changes or re-focused their inspection programmes due to these events.
- In order to lessen recurring events, further study by relevant CSNI groups on to determine similarities root cause could be beneficial.
- Planning and carrying out and steam generator cleaning programmes must be carefully reviewed especially considering the hazardous chemicals involved.
- Several events showed that communication between management and operations staff had implications to nuclear safety. WGOE suggests that CSNI/WGHOF may want to consider further study in this area.

8. **National OEF Developments** – France and Hungary provided presentation outlining their national OEF Programmes. This was followed by a round table in which member countries provided recent developments. WGOE agreed to request CNRA approval to publish report on National OEF Programmes.

9. **International and Regional OEF Developments** - Presentations on the current status of Incident Reporting System (IRS) and recent developments and the current status of the European Clearing House were made.

10. **New Proposals**: WGOE members discussed a number or areas of potential new work and agreed to continue discussions on potential new proposals at the next meeting.

11. WGOE members completed an evaluation form developed by the Chair and Vice-Chairs in order to assess the agenda and make improvements at future meetings.

12. **Next Meeting**: Members (tentatively) proposed holding a workshop on topical issues including a training session on the US programme on operating experience feedback national and in-depth discussion on international trending using national OEF inputs. Based on this, WGOE are requesting CNRA approval to have the workshop and next meeting the week of 26th May 2009 in the United States, hosted by the US NRC. Task Group Meetings will take place, if necessary, prior to or after the WGOE meeting.
Summary Record

The following is a summary record of the meeting. All presentations and papers distributed at the meeting will be made available to participants on a CD Rom and will be posted in the WGOE member’s area of the NEA web site. Additional copies (to NEA Members) are available upon request to the Secretariat. A list of the participants is included as Appendix A.

OPENING OF MEETING

1. Mrs. McDonald, Chair of WGOE opened the meeting noting that agenda was changed to reflect inputs received from both CNRA and CSNI, which would focus the groups work, as directed in the new mandate towards determining safety issues from a regulatory viewpoint and identifying safety issues that require additional research.

2. Changes in membership included: Ms. Pia Jacobsson (SSM, Sweden), Ms Lauriane Giroud replace Jacky Mochel (ASN, France). Regrets were received from Montserrat Casero UNESA, Spain, Kenneth Broman (SSM, Sweden and Michel Bieth IE, DG JRC).

3. The Secretariat provided a short update on actions taken by CNRA and other recent developments in OECD/NEA.

4. The agenda for the meeting was NEA/SEN/NRA/WGOE/A(2008)2 without changes.

5. WGOE members approved the Summary Record of the 3rd WGOE Meeting; NEA/SEN/NRA/WGOE(2008)1.

WGOE INTERACTIONS WITH THE CSNI

6. Mr. Hahn, Chair of CSNI provided a presentation on the expectations of CSNI in regard to the work of the group. He noted that CSNI and CNRA agree that the focus should move from procedural aspects to operating experience feedback. Regarding the current PoW, he stated that research needs resulting from the analysis of the fire operating events should be presented to the CSNI in June 2009. He also highlighted the fact that WGOE now plays a more streamlined role in IRS (i.e. leave the IRS coordination to its own steering body) and other similar data bases. He suggested that WGOE output has been limited over the past years and the group should produce 1 or 2 topical studies each year.

7. The Chair thanked Mr. Hahn for his inputs. It was noted that there is some misunderstanding in the term topical studies as many groups involved in OEF (e.g., IRS, EC, etc,) use this term. In general, similar to other NEA WGs, WGOE focuses more on producing SOAR reports rather than topical studies, although the intent of the comment was understood.

8. Mr. Reiersen, Chair of WGHOF1 provided a presentation on the work of this group focusing on the Developments and Discussion on Joint Root Cause Analysis Task. The objectives of the task are to identify: barriers to analysing and correctly identifying the HOF causes of events (questionnaire, analysis); barriers to implementing lessons learned from these analyses (questionnaire, analysis), and recommendations for overcoming these barriers and thereby improving the identification of HOF

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1 CSNI Working Group on Human and Organisational Factors
causes of events and supporting the successful implementation of appropriate corrective actions (small expert group meeting).

9. To carry out the task, WGHOF intends to: prepare a survey to gather experience and information about guidance used 12/08; Review responses 3/09 and organise a small experts’ group to discuss main issues in 9/09. He stated that WGOE input to the survey and participation at the expert’s group meeting would be beneficial. WGOE members agreed to review the surveys and provide assistance if feasible.

10. The Secretariat provided information on the results of the recent WGFC\textsuperscript{2} meeting. He noted that WGFC\textsuperscript{2} has prepared an integrated plan and updated their proposal on ageing management to include a second workshop. He also noted that the FINAS web site was now operational.

**WGOE Programme of Work**

**International Operational Experience Feedback Report – Implementation**

11. A progress report by the Secretariat on the implementation of IOEF recommendations. WGOE reviewed the implementation actions table and chart. It was noted that several recommendations had been fully implemented and progress had been made on a number of others. Members agreed that the table and chart should better reflect the current status, and also include the responsible group for completing the recommendation and forecast completion date. An updated version of the table and chart will be produced and provided to members following the meeting.

**Safety Analysis of Fire Operating Events**

12. Ms. Ross Lee reported on the results of the task group meeting held earlier this week. The task group reviewed the responses to the survey, the draft report and discussed the coordination of these results with the inputs received from other groups. In summary, it was noted that:

- Member countries needed to review and either, provide response if not already provided, or verify the information contained in the draft report.

- The Task Group reviewed the final draft of the WGIP report on Fire Inspection Programmes. It was agreed that further input from WGIP was not needed at this time. Both reports could be used by member countries in assessing their future inspection and operating experience feedback programmes in this area.

- While no input was received directly from either WGRisk or WGHOF, these groups could use the results of the report to determine whether any additional research is needed based on conclusions reached.

- The joint OECD-FIRE Project started in 2002 and includes 12 Member Countries. The objective is to collect and analyse fire events according a detailed set of parameters. The data are restricted to the Project but trend analyses are regularly published in the open literature. The information received from the OECD Fire Project reinforced the fact that the IRS does not provide a sufficient data base for trending.

\textsuperscript{2} CSNI Working Group on Fuel Cycle Safety
The Task group agreed that the report, allowing for additional and further clarification of responses and editing was ready for presentation to CNRA. WGOE members agreed to present the report to CNRA for approval allowing a 30 day period for completing the above steps.

Coordination with CNRA Working Groups

14. The Chair stated that she had communicated with the Chairs of WGIP and WGRNR over the past period. WGOE Members discussed the coordination with the following outcomes:

14.1. WGIP – Coordination is going well as evidenced by the results of the Fire tasks. The Chairs regularly meet.

14.2. WGRNR – The Chairs have held a teleconference and will continue to have them on a regular basis. WGOE members noted concerns with the work being performed by WGRNR on construction experience feedback data base. These were as follows:

- Is this the most effective and efficient method towards establishing a data base for construction experience. Members noted that perhaps it may be better to have such experience inputted directly to the IRS. If not, the data base should have the same format as IRS.

- It is important that construction experience be communicated to operating plants in order to ensure that lessons learnt, if applicable, are properly applied. WGOE members expressed the need to have access to the data base.

EXCHANGE OF INFORMATION

Safety Issues with Generic Importance

15. The Chair noted that this item had been changed based on input received from CNRA and CSNI to a review of events having safety issues with generic importance that need to be addressed from a regulatory viewpoint. Based on a number of events provided by WGOE Members the WGOE Chair and Vice-Chairs pre-selected 3 events that have provided generic lessons and new insights to report recipients in member countries. Presentations were made on the following events:

15.1. Japan (Steam Generator Hot Leg Nozzle Cracks)


15.3. France (Steam Generator Clogging)

16. By a round table, WGOE members reviewed their actions (and national OE data) on the above pre-selected issues in order to establish an international perspective on the safety significance. The results of this round table are contained in Appendix B.

17. A second round table was held in which member countries provided information on additional regulatory practices and methodologies applied in the assessment and utilisation of OE related to

3 Both WGIP and WGOE Chairs are from NII
events that had occurred in the past cycle. Additionally a special presentation was made by Mr. Foster on how licensees in the UK are exchanging OEF.

18. A final discussion was held to review potential requests to the CNRA (regulatory issues) and the CSNI (technical issues). The results were as follows:

18.1. Several regulators made changes or re-focused their inspection programmes due to these events.

18.2. In order to lessen recurring events, further study by relevant CSNI groups on to determine similarities root cause could be beneficial.

18.3. Planning and carrying out and steam generator cleaning programmes must be carefully reviewed especially considering the hazardous chemicals involved.

18.4. Several events showed that communication between management and operations staff had implications to nuclear safety. WGOE suggests that CSNI/WGHOF may want to consider further study in this area.

National OEF Developments

19. The Chair noted that Note: In order to get a better understanding of the way National Operating Experience Feedback Systems operate the IOEF Task Group compiled a short narratives outlining their practices in Appendix A of the report (ref: NEA/CNRA/R(2008)3. In order to get a comprehensive picture, Member countries had been requested to provide descriptions of their programmes over the past 6 months.

20. As a result, WGOE members agreed at the last meeting to enhance this exchange by requesting 2 or 3 countries at each WGOE meeting to provide a short presentation on their national OEF programme, followed by a short round table for other countries to submit any significant changes in their programmes over the past period. France and Hungary provided presentation outlining their national OEF Programmes. This was followed by a round table in which member countries provided recent developments. A brief summary follows (Participants wishing additional information on any of these events should contact the WGOE member):

20.1. Switzerland – Based on the new Atomic law (2005), two new guidelines will be developed on periodical reports (B02) and Events (B03), which contains OE Feedback.

20.2. Sweden – SSM is the new Swedish Radiation Safety Authority including formal SKI and SSI. Discussions are taking place on how to organise OEF and the resources for it, there is also a need for a new database and tools in order to produce reports, trends, etc. Industry is developing databases for trending including low level events and near misses.

20.3. France – Updating of the guidelines for assessment and utilisation of operating experience is in progress.

20.4. Germany – Modification of several regulations related to operating experience is in progress. Results from recent IRRS and the conclusions of the CNS are being reviewed.

20.5. United Kingdom – Incorporating changes based on results of IRRS. Increasing dialogue with industry.
20.6. Spain – In the process of providing binding regulations for NPP OEF programmes.

20.7. Canada – Preparing for IRRS next year. Looking at the need to centralise the function of IOEF for both the regulator and industry.

20.8. The Netherlands - Inclusion in regulatory body inspectorate (KFD) of non-installation supervision (e.g. radioactive sources, medical radiotherapy and radiodiagnostic apparatus, metal scrap, industrial and medical radiography); Transition of all KFD projects to the young generation and active knowledge transfer sessions to ensure OEF key knowledge based features are not lost.

20.9. United States – Continued success in communications, growing support for the “smart sample”, developed interactions with INPO.

21. A summary of the presentations and inputs is provided in Appendix C.

22. Following discussions WGOE members agreed to request CNRA approval to publish a report containing descriptions of the National OEF Programmes. A web site version will also be included, which countries can provide regular updates (Note: The hard copy report will be formatted based on subject and the web site edition will be based on country inputs.

International and Regional OEF Development

**Incident Reporting System**

23. Mr. Bernard-Bruls provided a presentation on the current status of IRS and recent developments. Highlights included:

23.1. 63 reports have been submitted (43 approved) to-date this year (81 in 2007 and 88 in 2006) and there is now a total 3487 reports in IRS database.

23.2. The average delay in reporting has increased by one month to 16 months in 2007, although 80% are received within 12 months. He described the event review process which was initiated in 2006 in which a group of participants from the NIS hold weekly meetings to review submitted reports.

23.3. He also provided information on current and activities and meetings, development of the common platform for IRS, FINAS and IRSRR.

23.4. Regarding Topical Studies (TS) he noted two underway one on extreme phenomena and the other on the analysis of IRS events related to interaction between the grid and the NPPs.

23.5. He highlighted the current work being performed to revise the IRS guidelines. Several meetings have taken place and a number of changes are being looked at including a new category for new findings and information to record good practices.

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4 IRS is joint IAEA/NEA System.
23.6. He added that there is a proposal to change the name of IRS to better recognise the capability of the system (IRS is not limited to just incidents). Preliminary feedback suggests that most countries prefer to keep the current acronym. He concluded by providing a list of planned meeting for 2009.

24. The Chair expressed some concern over duplication by the IRS coordinators proposal to discuss actions taken in response to events. She noted that this seems to go against the Committees inputs which calls for separation of IRS and WGOE activities such that WGOE will separate its work involving the review of events from that performed by the IRS as defined in the IOEF report.

European Commission – Joint Research Centre

25. Ms. Rangelova provided a presentation on the main activities for the past year. This included:

25.1. Establishment of the European Clearinghouse office at the institute and a review and progress report on current tasks. This included establishment of internal procedures, establishing links with TSOs (GRS, AVN and IRSN).

25.2. Initiating work on several technical reports on the following topics: the experiences gained from Shika NPP criticality event of 18 June 1999 – draft completed (w/ IAEA); the experiences gained from loss of power event at Forsmark NPP of 25 July 2006 - draft completed (w/ IAEA); the experiences gained from recent events on maintenance failures reported to the IRS - draft under preparation and topical study on applicability of lessons learned from IRS reported PWR events to VVER.

25.3. The annual meeting will take place 17th 18th December. She noted that the Clearinghouse contributes to the preparation of national operational event reports and that this service is open to any regulatory authority in the region. Technical Reports are based on preselected OE related issues and developed in co-operation with NEA, IAEA and IRS national co-ordinators. Training activities on Operational Event Assessment for Clearinghouse Members are also provided.

New WGOE Activities

26. A lengthy discussion ensued on the feasibility of developing international trending capability. Efforts to establish some links to trending with existing systems are difficult. Numerous suggestions were reviewed and members agreed that further discussion was needed. It was proposed holding a workshop on topical issues which would also include a training session on the US programme on operating experience feedback national and in-depth discussion on international trending using national OEF inputs.

27. Based on this, WGOE is requesting CNRA approval to have the workshop and next meeting the week of 26th May 2009 in the United States, hosted by the US NRC. Task Group Meetings will take place, if necessary, prior to or after the WGOE meeting.

5 The IOEF Operating Systems should concentrate on collecting high quality information on events and the Working Groups should focus on analysing events and determining the safety significance from a regulatory viewpoint.
Next Meeting

28. See Items 26 and 27.

Evaluation of Meeting

29. Members completed a survey form for evaluating the meeting. The results will be compiled and transmitted to all the members and used by the Chair and Vice-Chairs in planning for the next meeting.

Closure of Meeting

30. The Chair, Mrs. McDonald thanked the members for their active participation. She noted that the group had moved forward and adapted to the new format very well. The results showed that WGOE was taking the steps in accordance with the new mandate and the inputs received from the Committees.
Appendix A

LIST OF PARTICIPANTS

Louis Vandermeeren (Tractebel-Belgium)    Michel Lemay (CNSC- Canada)
Zdenek Tipek (SUJB-Czech Republic)        Seija Suksi (STUK-Finland)
Jouko Turpeinen (Fortum-Finland)          Remy Bertrand (IRSN-France)
Lauriane Giroud (ASN-France)               Didier Wattrellos (IRSN-France)
Lothar Hahn (GRS-Germany)                 Michael Maqua (GRS-Germany)
Laszlo Juhasz (HAEA-Hungary)              Shigeo Tamao (JNES-Japan)
Norio Watanabe (JNES-Japan)               Fred Van Iddekinge (VROM-Netherlands)
Mikhail Lankin (SEC NRS Russian Federation) Artur Muehleisen (SNSA, Slovenia)
Pavel Bobaly (NRA SR-Slovak Republic)      Carmen Rodriguez-Mate (CSN-Spain)
Elena Verduras Ruiz, Elena (CSN-Spain)     Pia Jacobsson, Pia (SSM-Sweden)
Josef Huser (HSK-Switzerland)              Vince Fisher (AWE-United Kingdom)
Kulvinder McDonald (HSE/NII-United Kingdom) Mary Jane Ross-Lee (NRC-United States)
Xavier Bernard-Bruls (IAEA)                Vesselina Rangelova (EC JRC)
Barry Kaufer (OECD/NEA)
Appendix B

SAFETY ISSUES WITH GENERIC IMPORTANCE

In addition to the main presentations by Japan, France and the United States, a number of countries submitted recent events via a WGOE Template. Other countries provided additional information at the meeting. The following is a summary of information received or presented. Participants wishing additional information on any of these events should contact either the WGOE member or the NEA Secretariat.

Czech Republic
Event: Tritium release through unauthorised profile – non conservative decision making.

Finland
Event: Loss of Safety classified electrical equipment due to high generator voltage peak (IRS #7932).

France
Event: Steam Generator Clogging (see slide presentation).
Safety Issues: Four events led to enhanced regulatory requirements; (1) cold weather leading to freezing of materials that were safety significant; (2) impact of extreme high external temperatures on operating of NPPs; (3) damages caused by external flooding; and (4) developing collecting experience feedback based on new construction activities underway.

Japan
Event: Steam Generator Hot Leg Nozzle Cracks (see slide presentation).

Mexico
Event: Unusual event due to high – high alarm in radiation monitor.

The Netherlands
Event: Steam Generator Cleaning Incident.

Sweden
Event: Trend on missing operational readiness verification and control rod events.

United States

United Kingdom
Safety Issues – Reviewed US event on counterfeit parts and new construction experience at Flammaville and Olkiluoto.