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European ALARA Newsletter

Editorial

2008 begins with a lot of important news for the European ALARA Network.

First of all, it is time to announce the election of our new Chairperson, Annemarie Schmitt-Hannig, who was nominated during the last Administrative Board meeting, in December 2007. As before, CEPN will continue the general coordination of the network, with the assistance of HPA. Together, we will pursue our efforts to make EAN more and more active and influential on the radiological protection scene.

But every rose has its thorn, and the new appointment coincides, and indeed has been brought about, by Christian Lefaure's retirement. It is time to pay tribute to Christian's talent and enthusiasm in launching and then driving EAN since 1996. He spared no effort to promote the implementation of the ALARA principle throughout Europe in the nuclear, industrial and medical fields, and his contribution to the cause of restricting occupational doses has been very significant. Hopefully, he has decided not to devote the rest of his life to gardening or bird watching, and will continue to help us in the development of ALARA networking throughout the world (Asia, Africa, South America, etc.). For these reasons, he remains an honorary member of the EAN Steering Group and no doubt we will continue to meet him wherever the optimisation of radiological protection is still at stake.

The third main EAN event is the organisation of the 11th Workshop on "ALARA in waste management" in Athens (Greece, 9-11 April 2008). Radioactive waste management has always been considered as the Achille's heel of nuclear activities, and is increasingly of concern in other sectors such as nuclear medicine and NORM. That is why it is very important for operators from all sectors to demonstrate their commitment to applying ALARA for the characterisation, measurement, control, packaging, disposal and final storage of radioactive wastes. As well as responding to the immediate concerns regarding radioactive waste, implementing ALARA in waste management is also an opportunity to integrate this activity - often seen as a poor relation - into the main operational and decisional chains. Only by doing so, can we hope to achieve real optimisation of doses, for both workers and the public, now and in the future.

2008 is also an olympic year: we have the ALARA torch in our hands, and must take it a little bit further. It is a real challenge.

A. Schmitt Hannig, EAN Chairperson
P. Croüail, EAN Coordinator
P. Shaw, EAN Secretary

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Recommendations of the 3rd RECAN Workshop on "Problems in Implementing Practical Optimization"

In the framework of the TC Project RER/9/089 - Development of National Capabilities for the Protection of Health and Safety of Workers Occupationally Exposed to Ionizing Radiation - the International Atomic Energy Agency (IAEA) in cooperation with the Government of Romania through the National Commission for Nuclear Activities Control (CNCAN) and the Romanian Society for Radiological Protection organized the 3rd RECAN Workshop on "Problems in Implementing Practical Optimization". This workshop was held in Brasov, Romania on 1 - 3 October 2007.

The workshop was attended by a total of 48 participants including representatives of 22 countries participating in the TC Project RER 9089, three external experts and two IAEA staff members.

The purpose of the workshop was:

(i) To exchange information on current issues related to implementation of the optimization principle in controlling workplace hazards and risks (application of the ALARA principle),
(ii) To share practical experience on how to solve the problems arising, and
(iii) To formulate recommendations regarding measures to solve the ALARA implementation problems in a most effective manner. An additional objective of the meeting was the approval of the RECAN Terms and Conditions and the election of the new RECAN Steering Committee.

The meting was designed to provide:

- A first session aiming at setting the scene: the IAEA presented its approach to networking in the general framework of its support to its Member States through, among others, the TC Projects,

- A second session provided to external experts to address issues such as networking in other European regions, Education and Training and the particular properties of RECAN,

- Session three was devoted to the case studies presented by the participating countries (Romania, Azerbaijan, Kazakhstan, Georgia, Croatia); additional presentations were provided by external experts on " Implementation of the optimization principle through self assessment", "Education and Training for Optimization", "Quality Management System and Optimization",

- Session four gave the opportunity to the IAEA's representatives and to theRECAN coordinator to describe RECAN by discussing the "Terms and Conditions" with the participants, and by describing the "visible products" of it (Newsletter and website). This session was concluded by the presentation of the composition of the RECAN Steering Committee whose members had to be renewed as established by the RECAN T&C,

- The following session was reserved for the working groups: four working groups were constituted and had to discuss two main issues:
  - How to improve the role of the regulatory body in implementing optimisation in practice (at the levels of legislation, authorizations, inspections, enforcement)?
  - How to improve optimisation on an operational level, based on the following: stakeholder involvement, Education and Training, developing protocols of good practices, self-assessment, quality management, developing safety culture, etc.?

- Session 6 provided the opportunity for the presentations of the main findings of the workshop and to agree on the recommendations for the different stakeholders,

- A closing session gave the opportunity to the IAEA's representatives for drawing the main conclusions from the event and to present the RECAN activities planned for 2008.

RECOMMENDATIONS

The main recommendations from this workshop as agreed on by the participants are presented below.

Recommendation 1: It is recommended that the IAEA further assists Member States in achieving the objectives of the Technical Cooperation Programme, in particular concerning TSA1 on regulatory infrastructures.

Recommendation 2: It is recommended that the IAEA further assists Member States in achieving the objectives of the International Action Plan on Occupational Radiation Protection (in particular action 7) by a continuation of support for networking within the region.

Recommendation 3: It is recommended that IAEA and the European Commission continue to support topical networks such as in the medical and in the NDT domains.

Recommendation 4: It is recommended that the IAEA and the European Commission closely cooperate in the further development of safety culture and quality management.

Recommendation 5: It is recommended that the regulatory bodies provide guidelines for inspections and check lists using a graded approach to the controls. Guidelines should include performance indicators such as monitoring results, incidents/accidents, self-assessment results, etc. Inspections should include interviews with workers.

Recommendation 6: It is recommended that the IAEA coordinates the development of systems allowing the dissemination of lessons learned from incidents and accidents.

Recommendation 7: The IAEA should promote the development and dissemination of protocols of good practices and the uses of ALARA methods and tools.

Recommendation 8: RECAN should provide a forum for experience exchange concerning SA implementation in the future. The Agency should consider the adaptation of the existing Working Material on SA in NPPs to other applications of ionizing radiations.

Summary of the 1st Workshop of the European ALARA Network for NORM

H. Schulz, K. Flesh (IAF-Radioökologie GmbH, Germany), R. Gellermann, E. Ettenhuber

From 20th until 22nd November 2007, the first workshop "European ALARA Network for NORM" took place in the conference centre of the Dorint hotel Dresden (Germany). The workshop provided a forum for the community (scientific, technical, regulatory, etc) involved in ALARA Network for NORM issues. This workshop, the first of its type, was devoted to the dissemination of topical information/knowledge on good radiation protection practice in the NORM industry and other work activities. Additionally, several issues relating to the revision of European Standards concerning NORM were discussed.

The workshop was organised by IAF - Radioökologie GmbH (Dresden, Germany), HGN Hydrogeologie (Magdeburg, Germany) and Robotron Datenbank-Software GmbH (Dresden, Germany).

Around 80 experts from 17 countries in Europe and Kuwait participated. The programme of the workshop can be downloaded from the web portal www.ean-norm.net. A brief summary of the presentations is given below.

In the introductory paper of the first session (A. Janssens, European Commission) presented the progress made by the European Commission for further development of the European Basic Safety Standards (BSS). More stringent demands on the Member States are intended to regulate the radiation protection in the field of naturally occurring radioactivity. In the future standards NORM industries that are generally of relevance in Europe with regard to the radiation protection of workers and members of the public, will be mentioned explicitly. The Member States are obliged to check their own situation by taking into account the national circumstances and to identify those industries that are of concern and that should be included into regulatory control, if necessary.

Also to be specified in the BSS is an exemption level of 1 Bq/g (for U-238 and Th-232 respectively), which should be applied by the Member States to decide on the inclusion of industries or industrial processes into regulatory control. To get good radiation protection practice in the industries of concern and, if possible, standardised procedures of control in the Member States, experience exchange and networking are important tools and should be developed by EAN_{NORM}.

In other fields of radiation protection (e.g. radiation protection in the nuclear industry), the EAN made valuable contributions to the development of radiation protection practice (C. Lefaure). K. Flesch introduced the main issues of the EAN_{NORM} - web portal, organisation of the scientific discussion and experience exchange with the 'contact points'.

At present, 57 experts from industry (15), authorities (34) and scientific institutions (8) are interested in cooperating with and contributing to EAN_{NORM}. The next steps of the development are the interconnection of these contact points and the design of the website with factual information and links.

In the discussion on good radiation protection practice, other hazards and risks of the workers have to be taken into account. G. Seitz made obvious, that radiation protection issues must not solely be discussed. Optimised solutions for protective measures can be achieved only if all hazards and risks are integrated in the decision process.

S. Mobbs commented on the reference levels recommended in RP 95 and 107 for the inclusion of material and processes into the radiation protection control.

Practical experience in radiation protection at work in several industrial plants was discussed in the 2nd session. Papers dealing with the radiation protection of workers at the production of gas and oil, in the phosphate and metallurgical industry were presented. There the problems of radioactivity are already taken into account in the work plans. The presented examples demonstrated that the exposure of workers can be kept below the annual dose level of 1 mSv, if simple protective measures are observed. The gained experience can be useful for other industrial plants where similar circumstances exist.

The presentations and discussions of the 3rd session were devoted to international standards and

recommendations. D. Wymer (IAEA) discussed the system of the International BSS, Safety Guides and Safety Reports published by the IAEA. The standards and guides are retained unchanged on the whole. In the Safety Report Series, additional papers will be published completing the recommendations for radiation protection practice in key NORM industries. A report dealing with radiation protection in the zircon industry will be published soon.

The presentation of A. Wiklund (European Commission) directed the attention of the participants to several issues associated with the revision of the European Standards for which the opinion and advice of the NORM community is sought. In order to achieve harmonisation between Member States the revised standards will more explicitly state the requirements concerning radiation protection in NORM industry and at other work activities. Furthermore, such work activities should be categorised as 'practices'. The standards will also provide criteria, which should be applied generally in deciding on the inclusion of processes into the regulatory system of radiation protection, for recycling of materials and for waste disposal. Nevertheless, flexibility on the controls required, and when they need be applied will be retained in the standards. An important issue is the possible dilution of radioactively contaminated materials before recycling/using or disposal.

After the presentation, these issues were discussed in four working groups. Whereas more stringent regulations and harmonised criteria for the inclusion of work activities and materials into regulatory control are regarded as appropriate, the participants position was divided concerning the 'dilution' of radioactively contaminated materials. The internal 'dilution' of such material with 'uncontaminated' material solely for the purpose of allowing an uncontrolled reuse or release should not be permitted. These processes should remain under control by the authority without exception. The uncontrolled disposal of huge amounts of low contaminated materials should be prevented/avoided, too.

In the 4th session the national authorities discussed the inclusion of the requirements of the European Standards into national regulations and the problems of implementation in practice. It seems, that the different criteria applied in the Member States are a particular barrier to harmonisation. Noticeably, very restrictive criteria are applied in Sweden (10 μSv/y for one natural radiation source).

Finally, R. Gellermann presented the results gained by a first analysis of the mailed questionnaires on the optimisation of radiation protection in NORM-industries (see conclusions below). This kind of analysis will be continued. Further questionnaires and dialogue with the responders are planned.

In the 5th session problems associated with the transportation and disposal of materials were discussed. Inconsistencies still exist in the international standards and national regulations urgently require harmonisation. The presented national approaches to managing the waste from NORM industries clearly illustrated this point.

The organisers consider that the aims of the workshop were achieved and that there was much to gain from the experience shared.

A CD-ROM containing all the presentation at the workshop will be distributed and can directly be obtained from IAF - Radioökologie GmbH and downloaded via www.ean-norm.net.

The Setting-up of the Asian Region ALARA Network (ARAN)

P. Deboodt (IAEA), C. Lefaure

The meeting for the setting-up for a new Asian Region ALARA Network was hosted by the Korea Institute of Nuclear Safety (KINS) from 3rd to 5th December 2007 in Daejon (South Korea). Representatives from 9 different countries (Australia, Bangladesh, China, India, Japan, Malaysia, Pakistan, Republic of Korea and Thailand) participated in that meeting. Mr. Pascal Deboodt, head of the Radiation Protection of Workers and Monitoring Unit at the IAEA (Division of Radiation, Transport and Waste Safety) chaired the meeting. Mr Christian Lefaure, chairman of the European ALARA Network and Mr David Woods, Project Lead Coordinator for the IAEA/RCA Radiation Protection Project for Asia, also participated as expert advisors to the meeting.

Mr Seong Ho Na, Vice President of the Korean Institute of Nuclear Safety opened the Meeting and welcomed the formation of an Asian ALARA Network for Sectors other than Nuclear Power Plants.

The terms and conditions of the ARAN were discussed. The aim of the network is quite similar to these of the EAN and RECAN networks: mainly to facilitate the development of ALARA culture over the region and to encourage the exchange of feedback experience between all participating countries.

COMPOSITION OF THE ARAN STEERING COMMITTEE

It was agreed that all 9 participating Member States at the first ARAN coordination meeting would be members of the first ARAN Steering Committee. In addition, two additional meeting participants from Japan and one additional participant from Korea were also co-opted onto the first Steering Committee. Other RCA Member States would be eligible when they will become involved in ARAN.

The composition of the ARAN Steering Committee is the following: Mr K Sakai (Chair), Mr W C Choi (Vice Chair), Mr K. Baldry (South Australian Environment Protection Authority, Australia), Mr S. Liu (Institute of Atomic Energy, China), Mr. M. L. Joshi (Bhabha Atomic Research Centre, Department of Atomic Energy, India), Mr S. Saigusa (National Institute of Radiological Science (NIRS), Japan), Mr. Sakai (NIRS, Japan), Mr T. Suzuki (NIRS, Japan), Mr Sobari (Atomic Energy Licencing Board, Ministry of Science Technology and Innovation, Malaysia), Mr Saeed ul Haque (Pakistan Atomic Energy Commission, Pakistan), Mr W. C. Choi (KINS, Republic of Korea), Mr Byung Soo Lee (KINS, Republic of Korea), Mr P. Suntarapai (Office of Atoms for Peace, Ministry of Science and Technology, Thailand) plus a Member to be nominated by the Bangladesh Atomic Energy Centre.

Mr K. Sakai (NIRS, Japan) was elected Chairman of ARAN and Mr W. C. Choi (KINS, Republic of Korea) was elected Vice Chairman.

Finally, it was agreed that Mr Lefaure, Mr Deboodt and Mr Woods would be advisors to the Steering Committee.

It was decided that, in this initial phase of ARAN, the Chair would not be rotated annually, at least for the first 3 years, to give stability for growth. With time ARAN Coordination could remain with NIRS and KINS but the Chair could rotate among the Members.

WORKSHOPS OF THE ASIA REGION ALARA NETWORK

The objective is to organise a yearly workshop and in between, due to distances and available resources, to favour electronic communication between the ARAN members.

The first Workshop of ARAN will be held from 5th to 7th of November 2008 on "Improving Radiation protection in Industrial Radiography". It will be hosted by NIRS in Chiba Japan. Japan also proposed an "open to all" one day ALARA Symposium on the day preceding the ARAN Workshop.

The maximum number of participants for the workshop would be between 30 and 40. The IAEA should support the participation of 2 representatives per RCA Member State rather than one (this will allow a Steering Committee representative and an NDT expert) and consider funding some expert presenters. However ARAN is willing to accept other self-funded participants to the Workshop from other countries. Finally NDT equipment manufacturers might be invited with the potential for a technical exhibition and financial sponsorship.

Analysis of Unintended Overexposure during Palliative Radiation Therapy Treatment and the Development of a Critical incident Reporting System in Switzerland

N. Stritt, M. Dorthe (SFOPH, Switzerland)

LEGAL PROVISIONS

In Switzerland, the use of ionising radiation in medicine is regulated by several ordinances. Whilst the Radiological Protection Ordinance gives a general framework, more detailed requirements are specified in technical Ordinances, such as the "Use of unsealed sources", the "Use of sealed sources in medicine" and the "X-ray" Ordinances. The Ordinance on medical accelerators is particularly relevant to radiation therapy, and in particular, requires overdoses to be notified to the surveillance authorities (Art. 27) (as is also required in Germany – see ALARA Newsletter Issue 21, October 2007).

INCIDENT SUMMARY

In 2006 an incident took place in a radiation therapy unit whereby an elderly patient was overexposed during a palliative treatment. The incident was discovered shortly after the final dose fraction had been administered, whilst undertaking routine checks of calculations. As required by law, the surveillance authority (SFOPH – Swiss Federal Office of Public Health) was informed by the medical physicist in charge.

The circumstances which led to the incident were investigated and fully clarified. An error was made in the hand-calculation whereby the fraction dose was not divided by the number of fields (2 fields: pa/ap), resulting in the wrong number of monitor units. None of the staff involved in the treatment noticed the unusually high number of monitor units. Fields are normally thoroughly checked one day after treatment starts. However, this treatment consisted of 3 fractions and, due to a lack of time, the monitor units were not re-calculated before the end of the final fraction which was 2 days after the start of treatment. As a consequence, the patient received a dose higher than intended.

Following the incident the overexposure of the patient was investigated; the calculation mistake had resulted in the patient being treated with 30 Gy instead of 15 Gy. It was decided to closely observe the patient during their palliative care. Sadly, the patient passed away a few weeks later. A post-mortem was undertaken, and the cause of death was found to be multifactorial with several findings unrelated to the overexposure.

LESSONS LEARNED / MEASURES

Several measures were identified in order to avoid such mistakes in the future:

- The definition of a stop-dose in the record and verify (R&V) system, which halts further treatment after the first session until the calculation check is performed,
- The calculation check has to be signed, and thus documented,
- The used data parameters, which are important for monitor unit calculation, correct delivery and documentation, have to be verified and listed prior to the second treatment.

RADIATION THERAPY CRITICAL REPORTING SYSTEM

Following discussions with relevant professional bodies, a working group comprising members of the Swiss Society of Radiobiology and Medical Physics (SSRMP) and the Swiss Association of Radiation Oncology (SASRO) was brought together to analyse future cases and propose measures in order to avoid future incidents. This group has been working on a CIRS (Critical Incident Reporting System) with the aim of making such a system available to each radiation therapy department in Switzerland. In collaboration with the SFOPH, they have been defining rules and content of this national CIRS database called ROSIS_CH. One issue specific to Switzerland relates to the use of different languages in different areas and it is planned to include the ability to enter the text of the input in the local language in the local expandable database with a translation to the different languages appearing in the national database, thus avoiding speculations about the source of the data. It is hoped the system will be available sometime in 2008.

ALARA NEWS

❑ ALARA Training Courses (in French)

Theses courses will be held in Saclay (France), from 18th to 20th March 2008, at the "Commissariat à l'Energie Atomique" (Centre de Saclay - INSTN/ UGL/ BSCE - F-91191 Gif-sur-Yvette Cedex) and will be organised by the "Institut National des Sciences et Techniques Nucléaires" (INSTN).

The subject will deal with the Implementation of the ALARA principle and how to manage occupational exposure. It will comprise lectures and case studies as well as work in small groups.

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❑ Conference of the Nordic Society of Radiation Protection

The Nordic Society of Radiation Protection organizes every 3rd year a conference in one the Nordic countries. Its next meeting will be held (partially in English) from 26th to 30th of May, 2008 in Ålesund (Norway).

More information on this conference can be found on the NSRP website: www.nsfs.org

❑ ISOE European Symposium on Occupational Exposure Management at Nuclear Facilities

The European Technical Centre of the international Information System on Occupational Exposure (ISOE) and the International Atomic Energy Agency (IAEA) are jointly organising the 2008 ISOE European Symposium, which will be held in Turku (Finland), from 25th to 27th June 2008. The OECD Nuclear Energy Agency (NEA) co-sponsors this Symposium.
The main aims of the Symposium are:

- To provide a large forum of information exchange on occupational exposure concerns (practices, management and procedures, dose results and reduction, improvement of techniques and tools, etc.), and
- To allow vendors to present their recent experience and developments in radiation protection (measurement techniques, operating and plant design improvements, ALARA practices during operation and outages, etc.) in a commercial exhibition.

The Symposium will provide an opportunity for the participants to take part in plenary sessions, and presentations of posters. Visits to the construction of the new Finnish EPR at TVO NPP, of the VLJ (repository for low and intermediate level of radioactive waste) and of ONKALO (underground research facility being built for rock characterisation for the final disposal of spent nuclear fuel) will be organised on the last day of the Symposium.

Programme and registration form can be found on the ISOE's Web Site: http://www.isoe-network.net.

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❑ 4th RECAN Workshop, Budva (Montenegro), 17-19 September 2008

The 4th Workshop of the Regional European and Central Asian ALARA Network (RECAN) will be held in Budva, Montenegro on 17-19 September, 2008. It will deal with "Problems in the industrial application of ionizing radiation sources".

The hosting institutions will be Centre for Eco-toxicological Research of Montenegro (CETI) and Agency for International Scientific, Educational,

Cultural and Technical Cooperation of the Government of Montenegro (ZAMTES). Taking into account guests and local participants, some 60-70 participants are expected.

Montenegro is a newly independent country and IAEA member state from 2006. Being the smallest of ex-Yugoslav republics (14.000 sqkm, 650 000 inhabitants) and situated in the southern Adriatic region, it is a popular tourist destination offering beautiful natural scenery, Mediterranean climate and gastronomic pleasures. Budva can be reached by road from Albania, Bosnia, Croatia and Serbia, by boat from Italy and by air (two international airports: Tivat, 20 km and Podgorica, 55 km). By the first article of its constitution, Montenegro is declared an "ecological state", which means that all major decisions and steps taken in the country should be viewed from an environmental preservation standpoint. In support of this political decree, which highlighted the environment as the most valuable asset of the country towards sustainable development, CETI was established as a governmental institution in 1998, so as to deal with environmental monitoring and related activities – measurements, assessments, studies, consultancies, communication with media and public information, etc. The radiation protection and monitoring department is an active IAEA counterpart in many relevant subjects, including radioactivity monitoring in the environment, personal, workplace and field dosimetry, radioactive waste management, nuclear analytical methods, etc. Time permitting, a technical visit to CETI could be made part of the Workshop.

More information on the Workshop will follow on RECAN web site.

PRESENTATION OF THE NEW EAN TEAM

Chairperson: Annemarie SCHMITT-HANNIG

Annemarie Schmitt-Hannig, born in 1954, has a university degree in physics. She gained experience in radiation protection at the research reactor at the University of Mainz, as well as in the area of medical physics at the Free University of Berlin. She held a research position at the Federal Health Office in Germany, from where she joined the Radiation Safety Section of the Division of Nuclear Safety of the International Atomic Energy Agency (IAEA) in Vienna. At the IAEA, Ms. Schmitt-Hannig established a programme on the Control of Radiation Sources before taking over a section head position at the Federal Office of Radiation Protection (BfS) which is the position she still occupies.

She served as radiation protection expert in a number of IAEA Peer Review and other missions, as well as lecturing in numerous IAEA training courses. She is a member of the IAEA Radiation Safety Standards Committee (RASSC) and the IAEA Steering Committee on the Implementation of a Strategy for Sustainable Education and Training in Radiation Safety, and last but not least, a founding member of the European ALARA Network (EAN).

Secretary: Peter SHAW

Peter Shaw graduated in Chemistry from Leeds Metropolitan University, and has post-graduation qualifications in Pollution Control, and Integrated Safety, Health and Environmental Management from the Open University. Board in 1979 and attended the Post Graduate and Advanced Radiological Protection Courses. In 2005, Peter joined the new Health Protection Agency (Radiation Protection Division). Peter has been involved in radiation metrology, external and internal dosimetry, radiochemistry, environmental modelling, emergency response, and the provision of radiation protection advice to employers in industry and other sectors. He has been a certified Radiation Protection Adviser (Qualified Expert) since 2001, and has been the UK representative for EAN since 2002. He is the nominated EAN Secretary and a member of the Newsletter Editorial Board, as well as being involved in the organisation of recent EAN workshops. Peter has undertaken several international projects for EC and IAEA, as well as being involved in a variety of international training events.

Coordinator: Pascal CROÜAIL

Pascal Croüail has a university master's degree in Nuclear Physics and is Nuclear Engineer qualified by the French National Institute of Nuclear Sciences and Techniques. He has worked at the Nuclear Protection Evaluation Centre (CEPN) since 1990, where, as project leader, he participated in numerous projects relating to implementing the optimisation of occupational radiological protection (ALARA) during the design, operation and decommissioning of French nuclear facilities (NPPs). He has also served as radiation protection expert for national and international bodies (IAEA, NEA-OECD, EC). More recently, he was involved in the implementation of an inclusive radiological protection organisation in the territories affected by the Chernobyl accident, and participated in several European projects and studies dealing with the management of post-accidental situations. Former treasurer of EAN, he is also member of the editorial board of the EAN Newsletter since its first issue (1996) and participated in the organisation and the elaboration of the programmes of the eleven EAN workshops.

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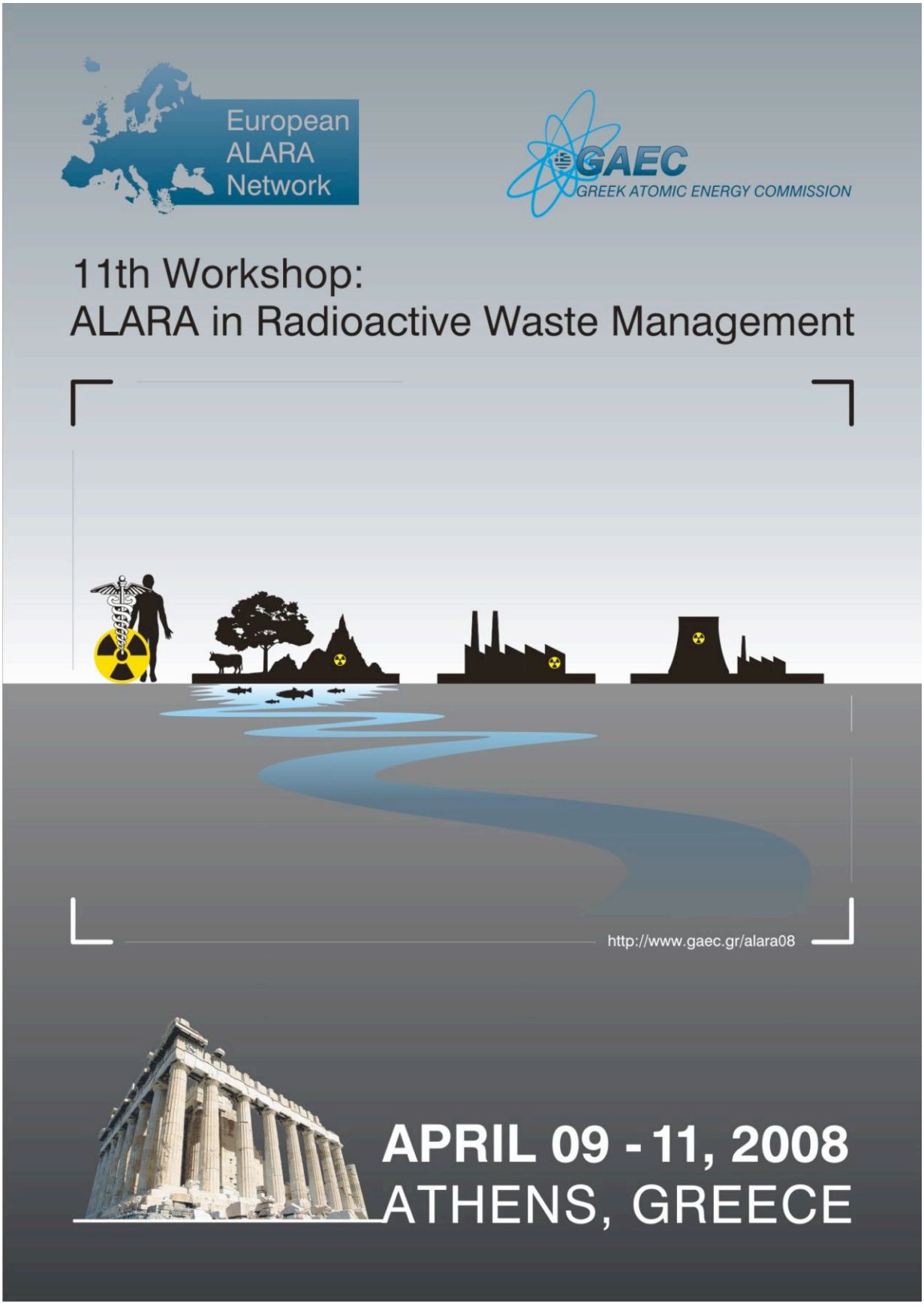
European
ALARA
Network
GAEC
GREEK ATOMIC ENERGY COMMISSION
11th Workshop:
ALARA in Radioactive Waste Management
http://www.gaec.gr/alara08
APRIL 09 - 11, 2008
ATHENS, GREECE

11th European ALARA Network - 'ALARA in Radioactive Waste Management' Athens (Greece) - April 9-11, 2008

Objective

The aim of the 11th EAN Workshop is to focus on the implementation of the ALARA principle with regard to occupational and public exposures arising from the management of radioactive waste. This includes waste from the nuclear, medical, NORM, industrial, education and research sectors.

As with previous workshops, this workshop will consist of presentations (oral and posters) intended to highlight the main issues, and a significant part of the programme will be devoted to discussions within working groups. From these discussions, participants will be expected to produce recommendations on ALARA in Radioactive Waste Management addressed to relevant local, national and international stakeholders.

Scope of the Workshop

The workshop programme will include the following subjects:

- Introduction and scene setting:
  - An overview of the current policies, strategies and regulations on waste management at the international and national levels, and how these take into account the ALARA principle.
- Stakeholder involvement:
  - How are different types of stakeholders involved in making waste management choices?
  - What are the different approaches in different European countries?
- Application of the ALARA principle:
  - Optimisation versus minimisation.
  - The approach to public doses and workers doses.
  - What is the role of decision-aiding techniques (cost-benefit analysis, etc.) in the 21st century?
  - How do re-use, recycling and disposal fit with the ALARA principle?
- Practical experience in applying ALARA to waste management in different sectors:
  - Medical,
  - Non-nuclear industry and research,
  - Nuclear industry and research,
  - NORM.

Working Group Topics

- Dealing with doses - how to take account of different dose distributions, worker and public doses, doses over long timescales, etc.
- How should ALARA be applied and implemented in the areas of re-use and recycling radioactive residues?
- How should ALARA be applied and implemented in the area of disposal of radioactive waste?
- Why should different strategies be applied to the different sectors and what should these differences be?
- What are the main criteria that should be used for decision-making in the management of radioactive waste?

Target Audience

The workshop should be of interest to a variety of stakeholders including regulatory bodies, waste producers and processors, research and other organisations with an interest in radioactive waste management and radiation protection.

The number of participants will be restricted to a maximum of 70. The workshop will take place at GAEC premises, near Athens, starting on the morning of Wednesday 9th April and finishing midday on Friday 11th April, 2008.

Fee

The attendance fee will be **400** €.

Registration by the 31st of March 2008 via the Workshop website:

http://www.eeae.gr/alara08

11th European ALARA Network Workshop,
ALARA in Radioactive Waste Management
Athens, Greece - 9th - 11th April 2008

Final Programme

Wednesday 9 April 2008

8:45 Welcome: Pr. L. Camarinopoulos (president of GAEC) & EAN

SESSION 1: INTRODUCTION AND SCENE SETTING - *Chair: V. Kamenopoulou (GAEC - Greece)*

9:00 **The System of Radiation Protection, a Framework for Radioactive Waste Management**
A. Janssens, S. Mundigl, W. Hilden, G. Bruno (European Commission)

9h30 **Optimisation Principle versus Minimisation Principle: Practical Application of the new ICRP Recommendations**
W. Weiss (BfS, Committee 4 of ICRP - Germany)

10:00 **ALARA in the IAEA Safety Standards, which are applicable to the Management of Radioactive Waste**
L. Baekelandt (FANC - Belgium), D. Louvat (IAEA)

10:30 *Coffee break (30 min)*

11:00 **Optimisation in the Management and Disposal of NORM Wastes - Experiences from the EAN_{NORM} Network**
K. Flesch, H. Schulz (IAF Radioökologie GmbH - Germany), R. Gellermann (HGN Hydrogeology GmbH - Germany), E. Ettenhuber (Germany)

11:20 **Review of Radioactive Waste in Ireland**
D. Howett (RPII - Ireland)

11:40 **For a consistent Management of Radioactive Waste in France: The National Plan for the Management of Radioactive Material and Waste**
P. Bodenez, J. Vallet (ASN - France)

12:00 ***Discussions on Session 1***

12:10 *Lunch (50 min)*

SESSION 2: STAKEHOLDER INVOLVEMENT AND DECISION-MAKING -
Chair: J. van der Steen (NRG - The Netherlands)

13:00 **Stakeholder Involvement in Radioactive Waste Management in the UK**
L. Warren (Independent Consultant, CoRWM - UK), B. Morley (LLW Repository Ltd - UK)

13:20 **Considering the Modalities of intergenerational Transfer associated with Radioactive Waste Management**
T. Schneider, C. Schieber (CEPN - France), S. Gadbois, G. Hériard Dubreuil (MUTADIS - France)

13:40 **The Belgian Experience on developing a near Surface Disposal Facility in Partnership with the local Stakeholders**
P. De Preter (NIRAS/ONDRAF - Belgium)

14:00 ***Discussions on Session 2***

14:10 ***Introduction to Working Groups***

14:30 **Working Group Session**

17:30 *Meeting with Working Groups representatives (60 min)*

Thursday 10 April 2008

SESSION 3: APPLICATION OF THE ALARA PRINCIPLE - *Chair: I. Lund (SSI - Sweden)*

9:00 **Dose Reduction below de Minimis Level?**
J. Feinhals (TUV Nord SysTec - Germany)

9:20 **Clearance and Recycling of very low Level Radioactive Waste: An ALARA Practice?**
L. Vaillant (CEPN - France)

9:40 **The Application of ALARA in Radioactive Waste Disposal - UK perspective**
B. Morley (LLW Repository Ltd - UK), G. Butler, G. McGlynn (Integrated Decision Management Ltd - UK)

10:00 **Occupational Exposure in Radioactive Waste Management in Germany**
V. Kunze (BfS - Germany), J. Feinhals (TUV Nord SysTec - Germany)

10:20 **Projected Worker and Public Doses from long-term intermediate Storage of Radioactive Waste at Nuclear Engineering Seibersdorf**
A. Brandl, R. Bayerknecht (Nuclear Enginneering Seibersdorf - Austria), A. Hefner (Austrian Research Center, Seibersdorf - Austria)

10:40 ***Discussions on Session 3***

10:50 *Coffee Break (30 min)*

SESSION 4a: PRACTICAL EXPERIENCE, INCLUDING TECHNICAL SOLUTIONS, FROM THE NON-NUCLEAR SECTORS - *Chair: B. Morley (LLW Repository Ltd - UK)*

11:20 **Doses to Sewage Workers due to I^{131} Waste used for Therapeutic Purposes**
S. Vogiatzi, E. Carinou, C. Potiriadis, C-J. Hourdakis, P. Dimitriou, V. Kamenopoulou (GAEC - Greece)

11:40 **Regulations on Radioactive Waste Practices using Unsealed Radioactive Sources**
A-L. Södermann, G. Hellström (SSI - Sweden)

12:00 **Assessing Doses to the Public from Discharges of Radionuclides from non-nuclear Establishments in the UK**
C. McDonnell (HPA - UK)

12:20 **Incineration of low-level Radioactive Wastes from non-nuclear Sources in the UK**
C. McDonnell (HPA - UK)

12:40 *Lunch (60 min)*

SESSION 4b: PRACTICAL EXPERIENCE, INCLUDING TECHNICAL SOLUTIONS, FROM THE NUCLEAR SECTOR - *Chair: C. Schieber (CEPN - France)*

13:40 **Application of the ALARA Principle in Dismantling and Disposal of a Research Reactor primary Cooling System Delay Tank**
A. Savidou, F. Tzika, S. Hatzidakis, I.E. Stamatelatos (NCSR Demokritos - Greece)

14:00 **Co-operation Development Project for new Treatment of SG's - Impact of Final Disposal Volumes and Recycling in Northern Europe**
B. Wirendal, A. Lindström, M. Lindberg (Studsvik Nuklear AB - Sweden), T. Hansson, T. Svedberg (Vattenfall Ringhals - Sweden)

14h20 **Optimisation of Dose Exposure at Cask Handling for Intermediate Storage**
K. Dreesen, D. Hoffmann, B. Lorenz (GNS Gesellschaft für Nuklear-Service - Germany)

14h40 ***Discussions on Session 4***

14:50 **Working Group Session**

17:30 *Meeting with Working Groups Representatives* (60 min)

20:30 Dinner

Friday 11 April 2008

SESSION 5: CONCLUSIONS AND RECOMMANDATIONS - *Chair: P. Croüail, P. Shaw (EAN)*

9:00 **Summary Reports from Working Groups**

10:30 *Coffee Break (30 min)*

11:00 **Final Recommendations and Discussion**
P. Shaw

12:30 *End of the Workshop*