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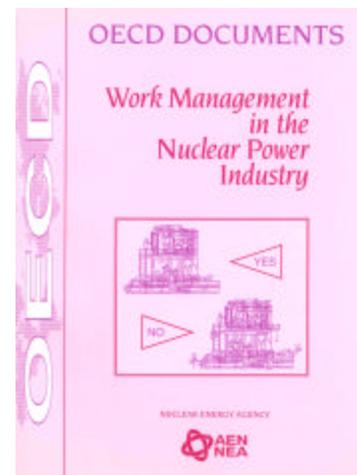
ISOE NEWS IS A PROJECT OF JOINT NEA-IAEA SECRETARIAT

Report on Work Management in the Nuclear Power Industry

The ISOE Expert Group on Work Management (EGWM) met in May 2007 in Paris. Its work is directed towards an update of the 1997 report on "[Work Management in the Nuclear Power Industry](#)" in order to reflect the current state of knowledge, technology and experience in occupational radiation protection of workers at nuclear power plants.

The plan is to have a first draft ready to the ISOE Steering Group at the beginning of November, in advance of the 2007 ISOE Annual Session. It was agreed that the EGWM should aim for availability of a published report for the 2008 International ALARA Symposium (November 2008).

The report will show senior plant managers where ALARA needs to be integrated into work management, to demonstrate what could be considered best practices (rather than simply a list of existing practices) and practical approaches to outage planning, and to provide practical information for promotion of ALARA. The 1997 report was widely accepted and applicable because of its focus on increasing effectiveness rather than simply on reducing dose, and the new report will aim to maintain this perspective.



Methodology of work to prepare the draft report

A password-protected web-based tool has been developed by the Asian Technical Centre (ATC) to allow on-line document review and submission of comments by the expert group.

As a follow-up to the meetings of the ISOE EGWM, the next milestones for the activities of this group concerning the development of the draft report on work management are as follows: - 31 July 2007: deadline for comments from members on individual chapters; - 31 August 2007: deadline for consolidation of comments and submission of new chapter master files by the lead technical centres; - 17/18 September 2007: 3rd meeting of the EGWM.

All ISOE National Coordinators and ISOE members are invited to contribute to the review and development of the new work management book. This can be done via the ATC "pink book" website at: http://fujitasv51.jnes.go.jp/general_pink/pink/. However, in order to access this website, a user name and password is needed to be set up by the ATC. If you do not already have an account, contact ISOE-ATC@jnes.go.jp.

ISOE Working Group on Data Analysis (WGDA)

The 2007 mid-year meeting of the ISOE WGDA meeting, chaired by Mr. Sergio Zorrilla (Laguna Verde NPP, Mexico) was held in May 2007. The summary status of its work includes the following:

ISOE database web development

The WGDA is continuing its work to migrate the ISOE occupational exposure database to the ISOE Network, as carried out the NEA and the ISOE Technical Centres. The current work involves the development and implementation of web-based data entry modules so that all ISOE member utilities can enter their ISOE data directly into the database via a web-browser. This will supplement the database analysis module already available on the ISOE Network. The current development schedule calls for an English language version of the data entry modules by end of year, to be used for entry of 2007 data in 2008.

WGDA Task team updates

New WGDA products: New Asian ISOE handbooks were developed by ATC, based on the ISOE annual reports, database and other products. The goal of this work is to demonstrate the use of ISOEDAT to Japanese utilities to improve ISOE usage, and motivate users towards continued dose reduction. The handbook contains many types of benchmarking reports derived using ISOEDAT. While the focus of the work was dose reduction in Japan rather than a specific WGDA product, ATC offered to make it available to other technical centres.

Review of decommissioning questionnaire: Dr. Jorg Kaulard (GRS, Germany) is chairing a new task team on decommissioning data which has been recently launched with the intent to improve the data collection aspects of the ISOE database questionnaires with respect to units undergoing decommissioning. It was agreed that the focus of the team's work should be the identification of appropriate occupational exposure data, influencing parameters and task descriptions (or other relevant information). In order to accomplish this in a meaningful manner, it was stressed that involvement of implementers in these activities was essential..

Survey, review on alpha values: Starting from a recently completed survey of alpha-value usage in Sweden, the ETC will work with Mr. Staffan Hennigor (Forsmark NPP, Sweden) to develop a questionnaire on alpha-value use and numerical value in NPPs within the ISOE programme. This will be used to collect feedback from the ISOE membership, the results of which will be reviewed at the Nov 2007 WGDA meeting.

Benchmarking elements/RP indicators: O. Guzman (CSN, Spain) reported on the activities of this team, noting that a list of possible RP indicators collected from previous workshops and meetings had been prepared as a starting point for discussion. The WGDA agreed that it would be useful to know which indicators would be of use to the ISOE membership, bearing in mind that each indicator must be achievable and easy to evaluate, and not duplicate indicators from other organisations.

Standardised terminology: Regarding the issue of standardised terminology within ISOEDAT, L. D'Ascenzo (ETC) provided a status report on existing task names with corresponding translations into various national languages within ISOEDAT. This list will be sent to all ISOE National Coordinators for their assistance in verification and in identifying those terms which still need to be translated or are not relevant.

Benchmarking visits

ETC reported on visits to Paks (Hungary) planned in September 2007 and Beznau (Switzerland) as well as Calvert Cliffs and Vogtle (USA) in 2006. These visits were organised by CEPN for the French utility EDF, using ISOE contact persons. While these visits were organised outside of ISOE financial resources, the participants have kindly agreed to share this information with the ISOE membership through the ISOE Network.

NATC reported on completed and planned visits for 2006 and 2007, including exchanges with France and Germany.

ATC presented information on visits in Feb 2007 to Finland and France. Topics discussed included remodelling and improvement works, exposure doses and ALARA activity. It was noted that there are differences between Japan and other countries in many points related to radiation work and exposure control systems, but that there is a desire to implement good experience in the Japanese system taking into account cultural differences.

Demonstration of ATC ISONE Library Search Engine

ATC demonstrated a new search engine that has been developed primarily for use to promote ISONE amongst Japanese utilities. While this tool operates by the stand-alone now, ATC has offered to make it available for implementation on the ISONE Network.

Election of new chairman

The NEA Secretariat informed the WGDA of the process that was undertaken since the last meeting with regards to the election of a new WGDA chair for the period 2007-2009 (covering the current Terms of Reference). Based on consultation with the members, it was reported that the group had unanimously approved the nominations of Mr. Sergio Zorrilla (Laguna Verda NPP, Mexico) for another term as WGDA chair and Dr. Jorg Kaulard (GRS, Germany) for the new position of vice-chair. These outcomes were unanimously approved by the group.

The next meeting of the ISONE WGDA will take place on 12-13 November 2007 at the headquarters of the OECD Nuclear Energy Agency in Paris, France as part of the 2007 ISONE annual session.

Asian ALARA Symposia

2006 ISONE Asian ALARA Symposium

The second ISONE Asian ALARA Symposium was held on October 12, 2006 in Yuzawa, Japan. This symposium was organised by the Asian Technical Centre, and saw the involvement of about 40 participants including from Korea and U.S. Following the introduction of EPRI SRMP and the current status of the exposure at Japanese nuclear power plants, the technologies for dose reduction were presented from three Japanese vendors. Moreover, the topic of current challenges and good practices were reported from one Korean utility and five Japanese utilities. The paper presented by Mr. Akira Nakamura (Kansai Electric Power Co., Inc.) on "ALARA Activities at Ohi NPP" was selected as the symposium's Distinguished Paper. Mr. Nakamura was invited to present this paper at the 2007 International ALARA Symposium in Fort Lauderdale, U.S. (Jan. 2007). On the following day (13th), they visited Kashiwazaki Kariwa Nuclear Power Station of Tokyo Electric Power Co., Ltd. and observed Unit 6, an ABWR (advanced boiling water reactor).



2007 ISONE Asian ALARA Symposium

The 2007 ISONE Asian ALARA Symposium will be held in Seoul, Korea from September 12 to 14, 2007. The date of 14th will take a Technical tour to Ulchin Nuclear Power Station. Further detailed guidance will be disseminated soon.

ISOE International ALARA Symposium January 2007 EPRI RP Conference

The 2007 ISOE International ALARA Symposium was held from 15-17 January 2007 in Fort Lauderdale, Florida, organised by the North American Technical Centre in cooperation with the Electric Power Research Institute (EPRI). The symposium was sponsored by the OECD Nuclear Energy Agency and the International Atomic Energy Agency. About 100 participants from 14 countries attended the meeting, in addition to various vendors.

Highlight of Plenary Session

World-Class ALARA Performance Award of North American Technical Centre

Mrs. Indira Kochery, RP Manager at Vogtle and Mr. Craig Bourne, Health Physicist at Vogtle won for the Vogtle NPP the World-Class ALARA Performance Award this year, primarily for their work in the area of remote monitoring. Mrs. Kochery described the management culture stated to exist at Vogtle and move on to the remote monitoring aspects of their program.

In answering the question "how did we get here", she noted four aspects of their RP culture: (1) teamwork, with associated communications effectiveness, (2) passion ("every 0.1 mrem counts", because the technology gives you a dose record to 0.1 mrem; every worker entering containment is on teledosimetry), (3) tenacity ("knock on 1000 doors; maybe 1 will open"), and (4) use of brute force, when that is necessary to maintain dose control.

Moving to "how do we stay here", Mrs Kochery noted the following areas:

(a) ownership and accountability, both non-outage and outage. She noted that since you are in a non-outage period a high percentage of the time, that is when you have to build your culture. She also noted the importance of contingency planning for the higher risk work for any given day and also any high-radiation-risk or high-radiation-dose work; she uses the common phrase about planning for success, but also planning for the worst that can happen. She stated that Vogtle heavily uses its own and other industry experience, and also that Vogtle uses contractor incentives. (Dose control is about 20% of the performance score of any contractor on site.)

(b) source term reduction. Mrs. Kochery tries to use all available technologies. She specifically noted shutdown chemistry control, permanent shielding, and remote monitoring technologies.

(c) technology. As a prelude to the later paper on remote technology at Vogtle, she noted that remote technologies are used station-wide, monitored from a centralized monitoring station. Robots are used, with the wiring in place to support their use quickly during an outage, so that no wiring installations are necessary during the outage. Vogtle uses electronic survey mapping. They have a photo system available for 360-degree viewing of most rooms in the RCA.

Mr. Craig Bourne presented additional information about their remote technology system. He noted that Central Monitoring Station (CMS) techs attend all ALARA briefing for higher-risk tasks, and that they work to place only very competent Techs in the CMS (2 in the room at a time). He stated that they have reduced their HP Tech doses by 75% and reduced their needs for contracted HP Techs by 65% as compared to their needs prior to use of remote monitoring technologies. They have cameras (now using about 22 coax camera cables per unit in their containment; including upgraded DVR recording capability), audio, teledosimetry, ARMs, resin sluice monitoring, and CAMs on the system, and they are adding HEPA flow information (as does Calvert Cliffs). The teledose base station is connected directly to the Radiax antenna system in the spent fuel pool area and may be expanded to other locations in-plant. Work-group supervisors often use the system to watch what their crews are doing and provide coaching as necessary. They are considering the potential to do more of the temperature, vibration and other monitoring via the system, as they note that anything capable of RS232 transmission could be a portion of the system.

Craig noted that HP Techs have individual dose goals for their jobs and are expected to justify receipt of unplanned dose. Their HP Techs now receive only about 5% of the total dose during an outage, whereas the figure used to be 15-20% prior to use of remote monitoring and additional HP Tech individual dose accountability.

CRPPH Expert Group on Occupational Exposure (EGOE)

The NEA Committee on Radiation Protection and Public Health (CRPPH) has created an ad-hoc group, the EGOE, to explore policy and regulatory issues in occupational radiation protection, in which the ISOE Steering Group agreed to participate to develop a proposal for further work. The EGOE, chaired by Mr. Kevin Bundy (CNSC, Canada) met in Jan 2007 to develop a proposal addressing areas in occupational radiation protection where the CRPPH could make a useful contribution. The work proposal focuses on three identified areas:

- Analysis of Operational Experience/RP Criteria for New Build
- Implementing new ICRP Recommendations, and
- Policy Issues in Occupational Radiation Protection.

At its meeting in May 2007, the CRPPH approved the work proposal, and instructed the EGOE to proceed with the identified tasks. The CRPPH also noted its appreciation for the involvement of ISOE in developing the proposal, and welcomed continued ISOE participation in EGOE, recognising the important operational experience that ISOE can bring to the discussions.

Following this approval, the proposal was sent to the ISOE Steering Group for their view on continued involvement, and additional ISOE nominations to the group's activities. Recognising the value of these topics, the Steering Group agreed to formally continue participation in the ongoing work of the EGOE, and the investigation of the identified topics.

In order to facilitate the participation of ISOE members in EGOE meetings, the NEA Secretariat will try to schedule EGOE meetings back-to-back with ISOE meetings, as far as possible. The next EGOE meeting will follow the Steering Group meeting in November 2007.

ISOE Network - <http://www.isoe-network.net>

The ISOE Network (www.isoe-network.net) is an international information exchange website on dose reduction and ALARA resources for ISOE members, providing rapid and integrated access to ISOE resources through a simple web browser interface. The network, containing both public and member-only resources, provides ISOE members with access to a broad and growing range of ALARA resources for radiation protection professionals at participating utilities and national regulatory authorities, including ISOE publications, reports and symposia proceedings, web forums for real-time communications amongst participants, members address books, and on-line access to the ISOE occupational exposure database.

While some of the resources on the ISOE Network are available to the public, such as ISOE official publications, only registered ISOE members have access to the detailed ISOE and ALARA resources available, which will only appear in the navigation menu after login. ISOE members who have registered for website access can enter their username and password in order to access these additional resources. The main features are listed below:

ALARA Library

The ALARA library includes now a broad range of general and technical publications, reports, presentations and proceedings, including:

- ISOE official publications, such as the ISOE Annual Reports
- ISOE Newsletters
- ISOE ALARA Symposia proceedings, presentation and papers
- ISOE site benchmarking visit reports on radiation protection practices
- Technical Centre information sheets
- ISOE technical reports (such as pressuriser replacements)
- ISOE meeting documents
- Training resources

The ALARA library and website are linked to a search engine to assist the user in locating information of relevance to their specific issue or problem. ATC is currently working on the development of a new search engine (see WGDA meeting).

ISOE Database

In order to increase user access to the occupational exposure data within the ISOE programme, the ISOE occupational exposure database, including the MADRAS database analysis module, previously only available on CD-ROM as an annual update, is now available to members through the ISOE Network. Upon login, the user will be presented with a set of pre-defined data queries to assist in benchmarking studies and trend analysis.

It is planned to provide the data input module by the end of 2007, or beginning of 2008 (see WGDA meeting).

Plans for new developments of the ISOE website

The content of the website always growing. As a consequence, it is planned to revise before the end of this year the structure and organisation of the web site in order to better respond to user's needs and facilitate the information retrieval. Any ISOE member who would like to provide feedback on the website improvements are welcomed to send them to the ISOE Secretariat (brian.ahier@oecd.org).

ISOE Programme Activities

ISOE Steering Group

The 2006 annual meeting of the ISOE Steering Group took place 8-10 November 2006 at IAEA Headquarters in Vienna, Austria. The ISOE Steering Group, which consists of utility and regulatory authorities from all ISOE participating countries, continued its focus on the effective management of the ISOE programme, reviewing the progress of the programme in 2006, approving the programme of work for 2007, and providing input into the development of new ISOE Terms and Conditions, which will come into effect on 1 January 2008.

One important topic addressed during the meeting was the election of the new ISOE Steering Group chair. Mr. Jean-Yves Gagnon (Gentilly NPP, Canada) end his term as ISOE chair, and was replaced by Mr. Wataru Mizumachi (JNES, Japan) as the chair for 2006-2008. The new ISOE Chair-elect is Mr. Vasile Simionov (Cernovoda NPP, Romania).

This year's annual meeting of the ISOE Steering Group will take place **14-16 November 2007** at the headquarters of the OECD Nuclear Energy Agency in Paris, France.

Upcoming ISOE Symposia

Regional Asian ISOE Symposium: The next Asian ISOE symposium, organised by the ATC, will be held from 12 to 14 September 2007 in Korea.

Regional European ISOE Symposium: The next European ISOE symposium, organised by the ETC, will be held from 24 to 27 June 2008 in Turku (Finland). The call for papers will be available on ISOE website by mid-July 2007.

Regional North American ISOE Symposium: The next North American ISOE symposium, organised by the NATC, will be held from 14 to 16 January 2008 in the USA.

International ISOE Symposium: The next International ISOE symposium, organised by the ATC, will be held from 10 to 12 November 2008 in Japan.