MULTINATIONAL DESIGN EVALUATION PROGRAMME
2008 ANNUAL REPORT

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N U C L E A R • E N E R G Y • A G E N C Y

FOREWORD

The Multinational Design Evaluation Programme (MDEP) is a multinational initiative to develop innovative approaches to leverage the resources and knowledge of the national regulatory authorities who will be undertaking the review of new reactor power plant designs. MDEP is organized under the Nuclear Energy Agency, which performs the technical secretariat function for the programme.

Under MDEP, nuclear regulators are aiming to enhance safety worldwide through increased co-operation. The enhanced co-operation among regulators will improve the efficiency and the effectiveness of the design review process, aiming at increased convergence of regulatory practices. A Steering Technical Committee (STC), formed of senior level representatives of the ten participating regulatory authorities, implements the MDEP activities that were initiated to work towards convergence of regulatory requirements and enhanced cooperation among regulators. This report discussed the goals and accomplishments of the MDEP programme of work after its first year of implementation.

Significant progress has been made over the past year on the overall MDEP goals of increased cooperation and enhanced convergence of requirements and practices. Accomplishments to date provide confidence that the MDEP structure and process is an effective method of accomplishing increased cooperation in regulatory design reviews. The progress that has already been achieved demonstrates that a broader level of cooperation and convergence is both possible and desirable.

The Policy Group is chaired by Mr. André-Claude Lacoste (ASN, France) and member countries include Canada, China, Finland, France, Japan, Republic of Korea, Russian Federation, South Africa, United Kingdom, and the United States.

Paris, 30 June 2009

The Multinational Design Evaluation Programme (MDEP) is one of the most ambitious initiatives taken at multinational level to develop approaches to pool resources and knowledge of the national regulatory authorities who will be undertaking the regulatory review of new reactor power plant designs. Launched on the basis of the existing cooperation between United States (Nuclear Regulatory Commission - NRC) and France (Nuclear Safety Authority – ASN), this initiative, to date, brings together Canada, China, Finland, France, Japan, Russia, South Africa, South Korea, the United Kingdom and the United States.

Under MDEP, national regulatory authorities are aiming at increasing the protection of the public and of the environment. In particular, through this enhanced cooperation, regulators will improve the efficiency and effectiveness of the design review process and will increase convergence of regulatory practices.

This first MDEP annual report covers MDEP activities from March 2008 to March 2009 and the programme, goals, accomplishments to date and plans for the future.

Conclusions of the MDEP pilot project have been confirmed during this first full year of work of MDEP. First outcomes show that convergence on Reference Regulatory Practices is a worthwhile and achievable goal. To this end, MDEP has to be considered as long-term programme, beyond its current two year mandate, with measurable and significant interim results. During its last meeting held on March, 12th, the MDEP Policy Group decided to extend the programme of work to a minimum of 5 years and to review periodically results obtained.

MDEP has also identified other organizations that have initiated programmes related to international cooperation on new reactors such as the Nuclear Energy Agency (NEA), the International Atomic Energy Agency (IAEA), the Generation IV International Forum (GIF) and the Western European Nuclear Regulators' Association (WENRA). Even if MDEP scope is focused on short-term activities related to specific design reviews conducted by the member countries, and efforts to harmonize specific regulatory practices and standards, MDEP will strive to more interact with these organizations to share results and to ensure that efforts are not duplicated.

MDEP has also noticed the interest of nuclear industry and other regulators not participating in the programme activities and working group results. On September 10-11 2009, MDEP will organize a specific conference to present them outcomes obtained so far by MDEP and by other groups supported by industry.

André-Claude Lacoste
Chairman of MDEP Policy Group

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EXECUTIVE SUMMARY

The Multinational Design Evaluation Programme (MDEP) is a multinational initiative to develop innovative approaches to leverage the resources and knowledge of mature, experienced national regulatory authorities who are, or will shortly be, undertaking the review of new reactor power plant designs. Current MDEP members are: Canada, China, Finland, France, Japan, Korea, Russian Federation, South Africa, the United Kingdom and the United States. In addition the IAEA takes part in the work of the MDEP. The OECD Nuclear Energy Agency (NEA) performs the Technical Secretariat function in support of MDEP. MDEP incorporates a broad range of activities including enhancing multilateral cooperation within existing regulatory framework; and increasing multinational convergence of codes, standards, and safety goals. A key concept throughout the work of MDEP is that national regulators retain sovereign authority for all licensing and regulatory decisions.

The original programme of work consisted of 10 activities which were chosen because they could be accomplished in the near term, and would result in significant benefits while requiring minimum resources. Working groups are implementing the activities in accordance with programme plans with specific activities and goals, and have established the necessary interfaces both within and outside of the MDEP members. This report provides a status of the programme after its first year of implementation.

Significant progress is being made on the overall MDEP goals of increased cooperation and enhanced convergence of requirements and practices. Particularly noteworthy accomplishments include: coordinated performance of vendor inspections, establishment of the MDEP library, development of common positions in the area of digital instrumentation and controls, and development of a comparison table which will identify the similarities and differences between the Korean, Japanese, and French codes for class I pressure vessels as they compare to the ASME code.

MDEP has developed a process for identifying common positions on specific issues among the member countries which may be based on existing standards, national regulatory guidance, best practices, and group inputs. These common positions will be endorsed by the MDEP members as MDEP Reference Regulatory Practices. The endorsed practices would become good practices, recommended by the MDEP.

Two design specific working groups have been formed to facilitate the MDEP programme goal of enhanced cooperation. The EPR working group currently consists of the regulatory authorities of France, Finland, U.S., UK, China, and Canada. The EPR Working Group has been successful in identifying issues that were addressed by one country but not fully considered in other countries. In the future, the working group plans to send joint questions to, or hold joint meetings with the vendor to discuss specific technical issues. Three expert subgroups are currently interacting on specific technical issues and additional subgroups have been proposed.

The AP1000 design specific working group was established in November 2008. Members include Canada, China, United Kingdom, and the United States. At the first meeting of the working group in February 2009, the members agreed on three areas that the working group should focus on initially: control rod drive mechanisms, civil engineering, and squib valves.

The Vendor Inspection Cooperation Working Group is well established and succeeding at enhancing vendor inspection activities. The first parallel vendor inspection resulted in sharing of insights by both groups of inspectors and an observer and was useful in understanding differences in inspection techniques and in scope between the regulators. The Working Group has developed a matrix that identifies the scope of inspections in each country. Understanding which inspection areas are covered by each regulator will help the MDEP countries to coordinate inspections, and will provide each regulator a better understanding of the applicability of inspection findings by other countries. Near term actions include: performing more frequent vendor inspections to continue to enhance the understanding of each other's inspection procedures and findings, develop and implement the common processes needed to adapt the scope of vendor inspections to take into account the needs of other member countries; and develop a framework that takes into account other regulators' vendor inspections.

The Digital I&C working group has reached agreement on common positions that are under review by the MDEP Steering Technical Committee as proposed Reference Regulatory Practices. The DICWG will also make recommendations to the I&C standards organizations of areas that it believes would be appropriate to consider for convergence of standards.

The Codes and Standards working group has made significant progress in comparing class 1 pressure vessel standards. After completion of the code-comparison table, the working group will identify significant differences and examine potential paths for reconciliation of the code differences including identifying those that should be pursued for potential convergence. Once an understanding is gained of the differences between the codes, each MDEP participant could endorse, in whole or in part, the pressure boundary codes and standards of other countries. The STC will consider the value of expanding the scope of this working group to additional topics including Class 1 piping, pumps and valves (Phase 2) and eventually Class 2 and 3 vessels, piping, pumps and valves.

The MDEP library has been established and is functional. The library serves as a central repository for all documents associated with the MDEP project. The electronic library includes a folder structure and provides for 2 levels of access which are password protected: (1) MDEP member countries, and (2) member countries participating in design specific working groups. NEA has issued a guidance document detailing library functions, access, and use.

Accomplishments to date provide confidence that the MDEP structure and process is an effective method of accomplishing increased cooperation in regulatory design reviews. The progress that has already been achieved demonstrates that a broader level of cooperation and convergence is both possible and desirable. It has become clear that the programme needs to continue beyond the original two year mandate to fully achieve the established goals. Therefore, MDEP will be considered a long term programme with interim results. The duration of the programme will be periodically evaluated. The MDEP Policy Group approved to extend the programme of work as a minimum to 5 years for setting specific expectations, goals, and programme plans for its activities. MDEP will consider additional areas where new activities would contribute significantly to meeting the MDEP programme goals.

MULTINATIONAL DESIGN EVALUATION PROGRAMME

1.0 Background

The Multinational Design Evaluation Programme (MDEP) is a multinational initiative to develop innovative approaches to leverage the resources and knowledge of mature, experienced national regulatory authorities who are, or will shortly be, undertaking the review of new reactor power plant designs. MDEP has evolved from primarily a design evaluation program to a multinational cooperation program that includes inspection activities and generic issues. The MDEP incorporates a broad range of activities including:

- Enhancing multilateral cooperation within existing regulatory framework.
- Increasing multinational convergence of codes, standards, and safety goals.
- Implementing MDEP products and regulatory practices to facilitate licensing reviews of new reactors, including those being developed by the Generation IV International Forum.

A key concept throughout the work of MDEP is better informing the decisions of regulatory authorities through multinational cooperation while retaining sovereign authority for all licensing and regulatory decisions.

The idea for the programme was initiated in 2005, and a planning meeting of the original 10 participating countries and IAEA was held in June 2006. Initial efforts consisted of multilateral cooperation on the European Pressurized Water Reactor (EPR) design reviews, and a pilot project to assess the feasibility of enhancing multinational cooperation and convergence of codes, standards, and safety goals within existing regulatory frameworks. The multilateral cooperation on the EPR expanded on bilateral interactions that had already been established between France and Finland. A structure for the programme was developed consisting of a Policy Group to oversee the programme, and a Steering Technical Committee with Working Groups to implement the programme with the Nuclear Energy Agency (NEA) serving as the Technical Secretariat. Terms of Reference for the programme were approved in September 2006.

A one year pilot project began in the fall of 2006 to assess the feasibility of the programme. The project consisted of two working groups. The first group was tasked with evaluating the similarities and differences in the licensing basis, scope of design review and safety goals of the participating countries. The second group was tasked with assessing the regulatory requirements and review associated with the manufacturing processes for components for use in nuclear power plants. The project was to assess both the regulatory requirements and programmes associated with licensing new nuclear plants. To facilitate completing this task within one year, the project was focused on three selected areas, namely, Severe Accidents, Emergency Core Cooling System performance, and Digital Instrumentation and Control (I&C) Systems. The study

of these selected areas provided insights into these specific areas, and more broadly, the overall licensing basis, scope of design review, and use of safety goals in the participating countries. By considering a broad range of vendor, utility, and regulator activities for each of these three topics, a sufficiently broad understanding of the regulatory activities in each country was developed.

The pilot project was completed in late 2007. The project demonstrated that there is a significant benefit in continuing a multilateral effort to cooperate on new reactor reviews, and resulted in specific areas for enhanced cooperation among regulators. The pilot project identified 10 specific recommendations that would result in significant benefits, while requiring minimum resources. The recommendations and a proposed structure of MDEP were approved by the Policy Group at its meeting in March 2008. A report dated May 2008, "Multinational Design Evaluation Programme – Pilot Project and Assessment" discusses how the pilot project was implemented, its conclusions, and the resulting programme of work and revised structure of MDEP going forward.

This report provides a status of the programme after its first year of implementation (March 2008 – March 2009).

2.0 Programme Goals and Outcomes

The main objective of the MDEP effort is to enable increased cooperation and establish reference regulatory practices to enhance the safety of new reactor designs. The enhanced cooperation among regulators will improve the effectiveness and efficiency of the regulatory design reviews, which are part of each country's licensing process. The programme focuses on cooperation and convergence of regulatory practices that will lead to convergence of regulatory requirements. Cooperation will allow a better understanding of each other's processes to encourage and facilitate eventual convergence. Convergence will be pursued on specific Reference Regulatory Practices. The goal of MDEP is not to independently develop new regulatory standards, but to build upon the similarities already existing and existing harmonization in the form of IAEA and other safety standards. In addition, the Reference Regulatory Practices developed in MDEP will be shared with IAEA for consideration in the IAEA standards development programme.

MDEP is meeting its goal of enabling increased cooperation through the activities of the working groups. MDEP has been very successful in providing a forum for regulatory bodies to cooperate on design evaluations and inspections. In addition to organizing working groups, MDEP has provided each regulator with peer contacts who share information and discuss issues informally. For example, the design specific working group members have benefitted significantly from the sharing of questions from the regulator, and seeing differences in the designs in each country, resulting in more informed regulatory decisions. MDEP members have also been highly successful in coordinating theirvendor inspections in which the regulators shared observations and insights. MDEP has made improvements in communicating information regarding the members' regulatory practices through development of an MDEP website, and an MDEP library which serves as a central repository for all documents associated with the MDEP project.

MDEP is meeting its goal of establish reference regulatory practices through the activities of the issue specific working groups. The groups are making comparisons of the regulatory practices in the member countries, identifying differences, and developing common positions. These common positions will be formalized as reference regulatory practices. The working groups are also working with codes and standards organizations to identify differences and propose areas of

convergence. MDEP has identified similarities and differences in inspection practices, and plans to develop a common MDEP vendor inspection procedure that could be used for vendor inspections.

Progress towards harmonised regulatory practices and requirements for Generation IV reactor design will be a natural outgrowth of this programme, as the participating regulatory authorities find that multinational cooperation and convergence of regulatory practices become routine elements of their planning and execution of new design evaluations. It is noteworthy that 6 of the 7 countries actively participating in the Generation IV International Forum (GIF) are also MDEP participants.

MDEP has been successful in meeting the expected outcomes as defined in the MDEP Terms of Reference by: increasing knowledge transfer, identifying similarities and differences in the regulatory practices; increasing stakeholders' understanding of regulatory practices; and enhancing the ability of regulatory bodies to cooperate in reactor design evaluations, vendor inspections, and construction oversight, leading to more efficient and more safety-focused regulatory decisions.

3.0 Programme Implementation

3.1 Structure

Participation in the Policy Group and Steering Technical Committee is intended for mature, experienced national safety authorities of interested countries that already have commitments for new build or firm plans to have commitments in the near future for new reactor designs. Current MDEP members are: Canada, China, Finland, France, Japan, Korea, Russian Federation, South Africa, the United Kingdom and the United States. In addition the IAEA takes part in the work of the MDEP.

The programme is governed by a Policy Group (PG)**,** made up of the heads of the participating organizations, and implemented by a Steering Technical Committee (STC) and its working groups. The STC consists of senior staff representatives from each of the participating national safety authorities plus a representative from the International Atomic Energy Agency (IAEA).

The Policy Group provides guidance to the STC on the overall approach, monitors the progress of the programme; and determines participation in the programme.

The Steering Technical Committee manages and approves the detailed programme of work including defining topics and working methods, establishment of technical working groups, and nomination of experts; approves procedures and technical papers developed by the working groups; establishes interfaces with other international efforts to benefit from available work and avoid duplication; develops procedures for the handling of information to be shared in the Project; reports to the Policy Group; and establishes additional Working Groups of experts for specific topics.

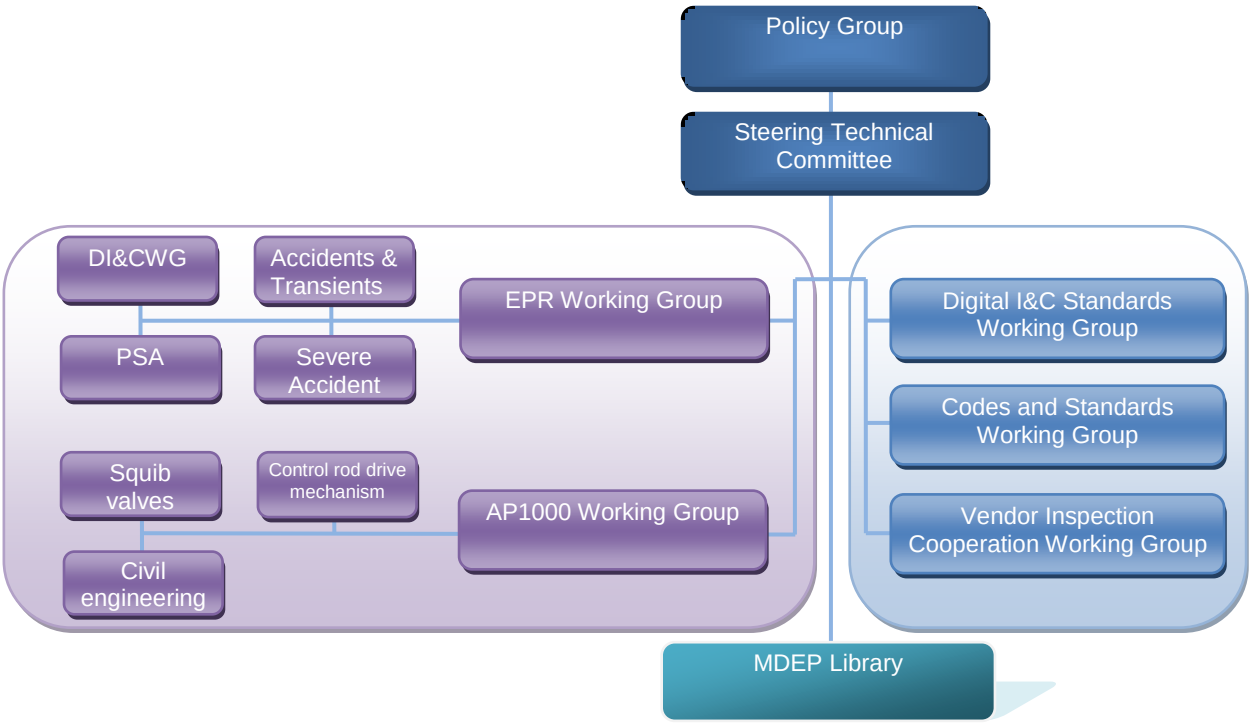
The OECD Nuclear Energy Agency (NEA) performs the Technical Secretariat function in support of MDEP.

Two lines of activities have been established to carry out the work.

- **Design specific activities.** Working groups for each new reactor design will share information and cooperate on specific reactor design evaluations and construction oversight. Participants in these working groups would be the countries who are actively reviewing, or preparing to review, or constructing the specific reactor design. A design specific working group is formed when three or more countries express interest in working together. An "Observer" level of engagement is available for regulatory bodies engaged in regulatory action based on interest expressed by governmental authority and/or by a utility for exploring the potential for licensing new nuclear power plants of certain designs. Observers can participate in the meetings as long as appropriate controls regarding the use and discussion of proprietary information are established. This status is temporary with expectations that circumstances and the necessary agreements that will allow full participation will develop in a short time period. Under the design specific working groups, subgroups have been formed to address specific technical issues.

- **Issue-specific activities**. Working groups are organized for the technical and regulatory process areas within the programme of work. These currently include, but are not limited to, vendor inspections, pressure boundary component codes and standards, and digital instrumentation and control standards. Membership in issue specific working groups is open to all MDEP participating countries and the IAEA representatives.

The chart below illustrates how the programme is organised.



3.2 Interactions

Other organizations have initiated programmes to facilitate international cooperation on new reactors. MDEP recognizes that because of its limited membership, other avenues should be available to countries interested in new build that do not meet the criteria for entrance to MDEP. MDEP strives to maintain an awareness of, and interact with, these other groups to ensure that they do not duplicate efforts, to benefit from the results of these activities, and to communicate MDEP activities and results to other regulators. To ensure that efforts are not duplicated between the groups, MDEP scope is focused on short-term activities related to specific design reviews being conducted by the member countries, and efforts to harmonize specific regulatory practices and standards.

MDEP is preparing for a conference to be held in fall 2009 with non-MDEP regulators, industry, international organizations, and standards organizations. The meeting should provide opportunities to present results obtained so far by MDEP and by other groups supported by industry.

Brief descriptions of these other programmes and their interfaces with MDEP are below.

3.2.1 NEA Committee on Nuclear Regulatory Activities (CNRA) WGRNR

The Working Group on Regulation of New Reactors (WGRNR) examines the regulatory issues of the siting, licensing and regulatory oversight of Generation III+ and Generation IV nuclear reactors. The WGRNR will focus in particular on construction inspection issues. The WGRNR co-ordinates its work with the work performed by MDEP such that it utilises its outputs and does not duplicate its efforts, and extends the results of MDEP to other CNRA members. MDEP interacts with the CNRA Working Groups on the Regulation of New Reactors and Working Group on Inspection Practice through the NEA staff who also serve as the Technical Secretariat for the CNRA. In addition, the chairs of CNRA WGRNR and MDEP STC meet frequently to discuss on-going activities and plans. WGRNR will be the focal point of interactions between MDEP and the CNRA and its working groups and will assist in coordinating communications and requests between the two activities.

3.2.2 IAEA

IAEA participates in the work of MDEP, in particular through participation in the Policy Group and STC meetings and issue specific working groups. In addition, the Reference Regulatory Practices developed in MDEP will be shared with IAEA for consideration in the IAEA standards development programme.

3.2.3 Western European Nuclear Regulators Association (WENRA),

WENRA is a non-governmental organisation comprised of the Heads and senior staff members of nuclear regulatory authorities of European countries with nuclear power plants. The main objectives of WENRA are to develop a common approach to nuclear safety, to provide an independent capability to examine nuclear safety in applicant countries and to be a network of chief nuclear safety regulators in Europe exchanging experience and discussing significant safety issues. A Reactor Harmonisation Working Group (RHWG) issues common reference levels with the objective of attaining a common approach to nuclear safety within Europe. Three members of the MDEP Policy Group are also members of WENRA. The MDEP STC has had the benefit of presentations on WENRA activities at two meetings. In addition, WENRA documents are

recognized as a valuable source of information and insights and can assist the MDEP STC in selecting future topics.

3.2.4 Generation IV International Forum Risk and Safety Working Group

MDEP interacts with GIF through the NEA staff who also serve as the Technical Secretariat for GIF**.** In addition, the chairman of the STC has met with chairman of the GIF Risk and Safety working group to discuss activities of mutual interest, and a member of the RSWG is a member of the MDEP STC. In addition, the MDEP STC Chairman will participate in the next Risk and Safety Working Group meeting scheduled in May 2009.

3.2.5 Industry groups

The World Nuclear Association_CORDEL group has expressed interest in the MDEP activities. Although the group is not a regulatory organization, and could not participate directly in MDEP, there are possible areas of common interest. The CORDEL group is interested, for example, in the standardization of industry practices for new reactors and this could influence the effectiveness of MDEP efforts to establish reference regulatory practices. Preliminary discussions have occurred but no formal meetings have been planned. The STC will continue to monitor CORDEL activities to identify opportunities for effective cooperation.

In addition, several Codes and Standards organisations have expressed interest in benefiting from the harmonization efforts. The MDEP working groups have been interfacing extensively with these organisations including enlisting their help in performing comparison exercises.

3.3 Process

MDEP has developed a process for identifying common positions on specific issues among the member countries which may be based on existing standards, national regulatory guidance, best practices, and group inputs using the agreed upon process. These “common positions” will be endorsed by the MDEP members as MDEP Reference Regulatory Practices. After a common position is developed by a working group, it is presented to the STC for endorsement, and then to the Policy Group for approval. Upon approval by the PG, the common positions will be published in an MDEP status report as Reference Regulatory Practices and will be made publicly available on the NEA MDEP website. Those endorsed practices would become good practices, recommended by the MDEP. There is no obligation on the part of any regulatory body to follow them. If a regulatory body chooses to adopt a Reference Regulatory Practice, it would be through that country’s normal processes. In addition, the Reference Regulatory Practices developed in MDEP will be shared with IAEA for consideration in the IAEA standards development programme.

4.0 Current Activities

In March 2008, the MDEP Policy Group approved the report that discussed the conclusions of the MDEP pilot project and endorsed all 10 recommendations of the pilot project. The recommendations were implemented under design specific working groups, issue-specific working groups, or through activities pursued by a lead country or NEA. This section provides progress against the original 10 recommendations, accomplishments, and planned future actions.

WORKING GROUPS

Five working groups currently exist under the STC**,** each of which is responsible for implementing one of the recommended actions. Each working group has a lead and co-lead country designated, and has developed a programme plan which identifies specific activities, schedules and contacts.

Terms of Reference for the design-specific and issue -specific working groups have been developed.

4.1 Recommendation 1: Share information and cooperate on specific reactor design evaluations under current reviews

4.1.1 EPR Design-Specific Working Group

The EPR working group currently consists of the regulatory authorities of France, Finland, U.S., UK, China and Canada. This working group was established in January 2006 as phase 1 of MDEP. Numerous meetings and technical exchanges have taken place to exchange information on the reviews being conducted in each country: Olkiluoto 3 (OL3) which is under construction in Finland; Flamanville 3 which is under construction in France; and the US version of the EPR which was submitted for design certification in the United States on 11 December 2007, and is referenced by 4 combined license applications currently under review. In November 2008, China and the UK were added as members. UK/NII is performing a Generic Design Assessment of the UK- EPR at the joint request of EDF and Areva. The design is essentially the same as the French design being constructed by EDF at Flamanville. Canada- CNSC and AREVA recently signed a Service Agreement and began a pre-project design review in February 2009. The EPR DSWG chair is Finland, which is in the process of constructing an EPR; and France, as the country of the design originator, is the vice-chair. The goals of the working group are to reach convergence in aspects of the review of the EPR design where possible and find areas where member countries can cooperate.

Accomplishments

The EPR Working Group has been successful in identifying issues that were addressed by one country but not yet fully considered in other countries. For example: STUK and ASN have shared portions of the detailed design of the EPR I&C system. This will assist countries such as the U.S. and the U.K. that have not seen the detailed design at this time. In addition, STUK shared its letter to AREVA outlining the I&C issues identified in their review. Other regulators plan

to issue similar documents in the first part of 2009. The working group has also shared the resolution of issues by one country that may not have been fully considered in other countries. For example, the U.S. shared its interim staff guidance for independence of data communications between various I&C systems that was developed last year with the other regulators.

The working group members have also discussed tools and methods used in their reviews that may be useful to other members. For example, NII discussed the use of statistical software testing as demonstration for software meeting a particular software reliability goal that can be used in the overall plant PRA. This tool may be useful to other regulators. Additionally, STUK's contractor provided a presentation of a software modeling tool that was used to evaluate the OL3 software and identified some requirements/design specification issues. This tool may be of value to other regulators when the software for the plants they are reviewing is under development.

The working group is maintaining in the MDEP library a listing of EPR Technical Issues that have been identified and are currently being evaluated by each of the participating regulators. The library provides a synopsis of the issues, the status within each technical body, and links to relevant documents.

Three technical expert subgroups have been formed to address specific issues in the design review. The status of these groups is discussed below.

EPR Digital I&C subgroup

All participating regulators and AREVA see I&C as the major licensing issue for EPR. The countries are progressing with similar schedules (principal decisions are to be made in mid-2009 in all of the countries). Issues being addressed include defense-in-depth, diversity and cyber security. The digital I&C subgroup held 3 meetings in 2008 and the participating countries continue informal discussions via email. The EPR I&C Working Group will issue a final report at the end of two years outlining the information shared between regulators for future use.

EPR Probabilistic Safety Assessment Subgroup

The EPR PSA subgroup members are comparing their level 1 PSAs. STUK provided a summary of the EPR PSA to NRC for review. Based on the interactions and review of materials, the NRC identified additional questions for the applicant. These questions were shared with STUK and ASN to assist in their review.

The participating countries provided global overviews of their PSA and assessment program. Technical areas discussed include fire PSA, external hazards, and common cause failures. Additional topics and documentation were identified for future information exchange.

The working group members continue discussions of the differences between the French, Finnish, and U.S. designs and regulatory approaches. In particular, they are working to understand the differences in HVAC design and system interdependencies, and diesel generator battery design capacity.

EPR Containment and Accident Analysis subgroup

The EPR containment subgroup members have discussed current issues and the status of their containment reviews, and identified areas where information sharing would be beneficial. For example, STUK shared two reports on containment heat removal, ASN made a presentation on

the assessment of methodologies used for transient analysis, and NRC made a presentation on issues associated with the US EPR LOCA mass and energy release and containment mixing and heat removal. The working group has interest in cooperating in the areas of post-LOCA Containment Heat Removal, Mass and Energy Release (including hot leg injection), Sump clogging (specifically down stream effects), and Combustible Gas Control.

Future activities for the subgroup include sharing the following information: long-term mass and energy releases to containment calculated by different tools (RELAP, CATHARE, and TRACE); insights on containment mixing studies; studies generated by VTT (STUK and NRC); and evaluations performed by different regulatory authorities.

EPR Working Group Future Actions

New expert subgroups were proposed and will be formalized at the next EPR WG meeting scheduled for June 2009. New expert subgroups may include: radiation protection and fire protection.

4.1.2 AP1000 design specific working group

The AP1000 design specific working group was established in November 2008 with initial participation by China, United Kingdom, and the United States. Canada was added as a member in March 2009. China (NNSA) is preparing to issue a construction permit in March 2009; 4 AP1000 units are planned for China. The US is reviewing Revision 16 and 17 to the AP1000 design certification and is concurrently reviewing combined license applications for 12 AP1000 units. UK is performing a generic design assessment of the AP1000 design. The AP1000 DSWG chair is the United States, the country of the design originator; and China, with plans to be the first country to begin the construction of an AP1000 in early 2009, is the vice-chair.

Accomplishments

Several preliminary meetings and discussions were held between US/NRC and UK/NII, and between US/NRC and China/NNSA during 2007 and 2008. A videoconference between NNSA, and the US/NRC was held on 8 July 2008. During the conference, the NRC and NNSA agreed to exchange documents related to their respective reviews of the AP1000 design, and agreed on the details of future workshops and technical meetings. The NRC conducted a two-week workshop on the AP1000 design in China in October 2008. NNSA and the NRC held detailed technical meetings February 9-13, 2009, in the U.S. Several documents related to the AP-1000 design review have been shared by the member countries through the MDEP library.

A meeting of NNSA, UK, US and Canada was held in February 2009 for the purpose of further defining the specific technical issues that the working group will address. At the meeting the members agreed on three areas that the working group will focus on: control rod drive mechanisms, civil engineering, and squib valves.

4.2 Recommendation 2: Undertake a multinational vendor inspection programme (Vendor Inspection Cooperation issue specific working group)

A Working Group on Component Manufacturing Oversight was established as part of the MDEP Pilot Project to assess the regulatory requirements and review associated with the manufacturing processes for components for use in nuclear power plants. The working group

met with the design code bodies from the U.S., France, Japan, and Korea, and found that component manufacturing is currently subject to multiple inspections and audits similar in scope and in safety objectives, but conducted by different organisations. The pilot project concluded that the formation of multi-national regulatory teams to perform inspections of component manufacturers will improve effectiveness and efficiency in the regulatory assessment of highest safety class components.

A working group was established to continue the work of the pilot project to identify areas of commonality and differences between regulatory practices of participating countries in the area of vendor inspection programmes. ASN chairs this working group. The primary objective of the working group is to facilitate continued dialogue between the participating countries regarding vendor performance, to increase the understanding of commonalities and differences in vendor oversight practices used by the participating regulators, and to identify opportunities for observation or participation in each others vendor inspections. The working group will develop an overall framework and timeline for the conduct of inspections of vendors, and a protocol for sharing results among national regulatory bodies. Longer term, the working group will develop common processes to adapt the scope of vendor inspections to take into account the needs of participating countries; and to develop a framework that addresses participating regulators' vendor inspection requirements to support the shared use of inspection results.

The group identified its scope and objectives, and a detailed project plan for 2008-2010. The scope of the group is initially focused on pressure retaining components for reactor coolant systems. As experience is gained, the scope may be increased to other areas. The working group identified two objectives: (1) Improve the effectiveness and efficiency of vendor inspections by building on other regulator(s) work; and (2) sharing the results of vendor inspection to allow the participating countries to take into account vendor inspections performed by others.

Accomplishments

The MDEP countries completed surveys for the purpose of identifying areas of commonality and differences in the regulatory inspection practices, and to facilitate sharing information (programs, reports, etc.). Results of the survey indicate that there are areas where the regulatory frameworks are aligned. For example, all participating countries include the concept of holding the license holder or facility owner responsible for assuring the quality of all of the safety-related components used in the construction of their plants. In addition, all of the participating countries document their inspection activities in a report, require corrective actions for identified deficiencies, used documented inspection procedures or plans, and can conduct inspections without requiring permission from the inspected organization.

A key area of difference is in the scope of inspections. The scope ranges from focusing on assuring the licensees are effectively overseeing vendor activities without direct regulatory inspection of vendor activities, to requiring regulator witness and hold points in the fabrication of products. The participating countries were divided into three categories associated with different controls for vendor oversight. Based on the survey results, the working group agreed that future observation, participation, and coordinated inspections should focus primarily on the quality assurance program inspections.

The Working Group will develop a matrix that identifies the scope of inspections in each country. Understanding which inspection areas are covered by each regulator will help the MDEP countries to coordinate vendor inspections, and will provide each regulator a better understanding of the applicability of inspection findings by other countries.

The first parallel vendor inspection was held during the week of 26 May 2008. Both the Korean Regulator (KINS) and the NRC conducted independent, simultaneous inspections of Doosan Heavy Industries. Insights from both groups of inspectors were shared each day during the inspection. In addition to the interactions between KINS and the NRC, an ASN representative observed the inspections and shared insights on his observations during the inspection. Consistent with the Working Group's project plan, the NRC and KINS inspection reports will be made available to all MDEP countries. The participating countries found this parallel inspection useful in understanding differences in inspection techniques and in scope between the regulators. For example, as a result of observing KINS and ASN inspections, the NRC plans to expand its use of technical experts in future inspections.

The member countries have begun to share information by providing other countries with a list of currently scheduled vendor inspections, and samples of recent inspection reports, experiences, and lessons learned. At its most recent meeting, the working group identified seven opportunities for participating countries to observe or participate in vendor inspections being conducted by other regulators, and two opportunities to conduct parallel inspections.

Future Actions

A subgroup consisting of the United Kingdom, South Korea, and the U.S. are developing draft guidelines for the observation of or participation in vendor inspections conducted by other regulators, and for the conduct of parallel vendor inspections. The draft guidelines will be discussed at the next working group meeting.

The working group has initiated an activity that could lead to harmonising quality assurance requirements of the regulatory bodies. The group is conducting a new survey on quality assurance requirements used in the oversight of vendors. The results of the survey should be available in April 2009.

In 2009, the working group plans to perform more vendor inspections in which one regulatory carries out the inspection and multiple other regulators are invited to observe This will continue to enhance the exchange of information between the different regulators to better understand inspection scopes and safety findings and how these findings may be utilized. In 2010, the group plans to develop and implement the common processes needed to adapt the scope of vendor inspections to take into account the needs of other member countries; and to develop a framework that takes into account other regulators' vendor inspections.

Longer term, the working group may develop a common MDEP vendor inspection procedure that could be used for vendorinspections.

The working group also plans to explore expanding their activities beyond pressure boundary components into areas such as electrical and mechanical components, concrete, and examine modular construction as an area where vendor inspections can be useful to MDEP members.

4.3 Recommendation 3: Converge on codes and standards for pressure boundary components (Pressure Boundary Codes and Standards issue specific working group)

The primary goal of the Codes and Standards Working Group (CSWG) is to achieve convergence of regulatory requirements in the area of component design. A major initial step

towards this goal is establishing a retrievable data base of the similarities and differences among the codes and standards used in the design of pressure boundary components. The initial effort will emphasize similarities and differences among the codes and standards used in the U.S. (ASME), France (RCCM), Japan (JSME), Canada (CSA), and Korea (KEPIC). Future efforts are anticipated to address codes and standards in other countries including possibly the Russian Federation and China. The working group's goal is to perform an assessment of the similarities and differences for the ASME, RCCM, JSME, CSA, and KEPIC codes and standards and identify the most beneficial areas for convergence. Changes in codes and standards can only be made by the standards development organizations (SDOs) themselves and therefore, the role of the working group in this area is to assist in identifying and resolving important differences. The SDOs are performing a Code-comparison project in conjunction with the working group's efforts. The goal of both the SDOs and the CSWG is to achieve global harmonization of pressure-boundary design codes for nuclear power plants.

Accomplishments:

The CSWG has interacted with standards development organisations (SDOs) which have formed a steering committee composed of the representatives of ASME, JSME, KEPIC, AFCEN, CSA, vendors, and utilities. The CSWG is represented on the steering committee by the representative from the US NRC. The SDOs are preparing a comparison table of the following pressure boundary codes for Class 1 pressure vessels: ASME Boiler and Pressure Vessel Code, RCC-M, JSME S NC1, and KEPIC. This assessment is being accomplished through correspondence and joint meetings between the working group and SDOs. The initial effort focusing on pressure vessel codes will result in a database which will identify the similarities and differences between the Korean, Japanese, and French codes as they compare to the ASME code. The project is designed to use the ASME code as the basis for the comparison since most of the codes under review originated from the ASME codes. The source of the differences in the codes such as regulatory requirements or code organization approach will also be addressed.

The SDOs have made good progress in developing their Code-comparison table. On October 29-30, 2008, the CSWG met with the SDOs to discuss the preliminary results of their Code-comparison project. Each SDO presented the status of its Code-comparison activity, discussed examples of Code differences, and described how the significance of Code differences would be addressed. The SDOs noted that the Code-comparison table will discuss the source of the differences (e.g., regulatory, technical, industry practice, etc.) and will address specific reasons for the differences. At this time, the goal of the Code-comparison project is harmonization rather than convergence of Code requirements. The key to achieving harmonization is to understand the source of and reasons for the differences in order to assess their significance. The first phase of the Code-comparison project is comparing Code requirements for Class 1 (reactor coolant pressure-boundary) vessels. In the next phase, the SDOs will include other Class 1 components (i.e., piping, pumps and valves). At a meeting in February 2009, the SDOs discussed in more detail technical Code differences, consistency in table format, and significance of Code differences. This meeting was attended by representatives of the CSWG.

At this time, the Phase 1 Code-comparison activity for KEA's KEPIC Code is complete. The first draft of JSME's S-NC1 Code-comparison table, and the first draft of AFCEN's RCCM Code comparison is complete. The final Code-comparison document is scheduled to be issued in May 2009.

The working group made several observations based on information collected to date: First, many significant differences arise over time with those Codes that were based on an earlier

versions of the ASME Code (i.e., JSME's S-NC1 and AFCEN's RCCM Codes), in part, due to industry practices and regulatory policy. Those Codes that were based on later versions of the ASME Code—or continue to adopt subsequent ASME Code editions and addenda—will see only minor differences. Those Codes that were developed independently from the ASME Code will likely see the most significant differences. Second, each country's standard industry practices for design and construction plays a large role in the development of each country's Code requirements. Consequently, some Code requirements for one country might not be applicable to nor appropriate for another country. Lastly, many other documents beyond the Code itself, often plays a major role in the final component (e.g., other industry standards, regulatory guidance, and manufacturer's specifications).

Next Steps:

After completion of the code-comparison table, the working group will identify significant differences and examine potential paths for reconciliation of the code differences including identifying those that should be pursued for potential convergence. Once an understanding is gained of the differences between the codes, each MDEP participant could endorse, in whole or in part, the pressure boundary codes and standards of other countries. Alternatively, each MDEP participant could initiate their national process to endorse the codes and standards of other countries as they see appropriate**.**

Russia has initiated a Code-comparison effort and expects to complete its Phase 1 activity in mid-2009. After Russia is included in the project and identifies its Code differences, its results will be amended to the Phase 1 Code-comparison results of Korea, Japan, and France.

The overall CSWG project is extensive. The expansion of the Phase 1 task (Class 1 vessels) to include Russia and, possibly, Canada will extend the overall Phase 1 schedule to mid-to-late 2009. The schedule to expand the scope to include Class 1 piping, pumps and valves (Phase 2) has not yet been established. Currently, plans to further expand the scope of work to include Class 2 and 3 vessels, piping, pumps and valves will need to discussed at the next CSWG meeting (July 2009) and will depend on the success of Phases 1 and 2.

4.4 Recommendation 4: Evaluate the similarities and differences in other codes and standards, beginning with a comparison of the digital instrumentation and control standards (Digital I & C Standards issue specific working group)

In moving towards convergence, the codes and standards used in design, manufacture, installation and construction of new reactor designs are fundamental. The goal of this recommendation is to perform a comparison, identify the similarities and differences, and perform an evaluation to determine whether the differences are significant, or merely different ways of expressing essentially the same requirements. The comparison will first be performed on the Digital I & C standards. The goals of this working group are to perform a comparison exercise, analyze the results, and identify which differences should be rated as priority for increased convergence work. The WG first identified agreed upon areas of interest, followed by examination of similarities and differences in regulatory requirements applicable to these areas. Subsequently, the members determined if there are enough similarities and overlap in the regulatory approaches of each member to develop a common position.

As a long term goal, the working group will interact with the relevant standards organisations with the aim of getting increased convergence. The working group will also identify areas of interest where there are no established standards.

Accomplishments:

The working group engaged the I&C standards organizations (IEC and IEEE) regarding their participation in a comparison exercise of the standards and increased coordination related to digital instrumentation and controls. A detailed comparison table has been developed and reviewed by the working group. The working group has also interfaced with several equipment designers and manufacturers to discuss their concerns and challenges with differences in standards and regulatory requirements.

The working group identified the member countries' most significant technical issues regarding standards and regulatory guidance. This list was used to better understand the main issues and to determine priorities for the working group. The top two issues were determined to be defense-in-depth and diversity, and data communications.

The DICWG developed a process for identifying common positions on specific issues among the member countries which may be based on the existing standards, national regulatory guidance, best practices, and group inputs using the agreed process/framework. To date, the working group has identified two areas for potential convergence and has drafted proposed common positions: software common cause failure, and software tools. The WG expects to finalize these positions by mid-2009.

Next steps:

The DICWG will make recommendations to the standards organizations of areas that it believes would be appropriate to consider for convergence of standards. These recommendations will be communicated to the standards organizations in a letter.

The working group has identified potential areas that should be explored for future common positions.

The working group will develop specific protocols to communicate with the design specific working groups for digital instrumentation and controls in order to increase efficiency and effectiveness.

INTERACTION WITH OTHER ACTIVITIES

4.5 Recommendation 5: Complete the evaluation of the similarities and differences in the overall scope of the regulatory review and analysis for severe accidents and develop a draft reference scope of review

The pilot project expert group on severe accidents concluded that a significant degree of similarity exists in the regulatory processes for reviews performed to ensure that design requirements have been met, and independent analyses and calculations performed by the

regulators to verify and/or validate the acceptability of the design. Many countries follow the basic objectives defined in IAEA Safety Guide GS-G-1.2, "Review and Assessment of Nuclear Facilities by the Regulatory Body." All participating countries perform detailed reviews of the safety analysis to various extents, including independent confirmatory analyses and calculations. The group also noted that there is a general level of design requirements that is in line with the IAEA Safety Requirements in applying a deterministic approach, for example defence in depth, single failure criteria, and safety margins. Likewise, there are similarities in the application of probabilistic methods in complementing the deterministic approach.

The experts concluded that some degree of similarity exists regarding the Severe Accident qualitative requirements, including the scope, level of defence-in-depth approach, supporting principles, deterministic analysis, and probabilistic safety assessment quality, scope and methodology. However, it was concluded that the numerical safety goals were different.

The goal of this recommendation is agreement by the MDEP members on a reference level of the overall scope of the regulatory review and analysis. A long term goal is a harmonized scope of the regulatory review and analysis in the area of severe accidents.

Next steps:

The MDEP members believe that this issue is important and worth pursuing. Because the participating regulatory authorities in MDEP represent three quarters of the operating reactors and most new reactors under review, the MDEP STC is in a unique position to contribute to other harmonization efforts. The STC will identify technical experts who will further explore the issue and monitor ongoing work in this area by other groups including IAEA, NEA/CSNI and WENRA. The experts will report back to the STC with recommendations on how MDEP can provide assistance to the work being performed in this area.

This issue is also being addressed by MDEP through the design specific working groups.

4.6 Recommendation 6: Compare how top level safety goals are derived, expressed, achievement is judged among the participating countries, and determine the extent to which they can be considered equivalent.

The goal of this recommendation is to enhance cooperation by having a better understanding of how decisions have been reached by other regulators. To do this, regulators must have a good understanding of the top level safety goals and the extent to which they are equivalent. The top level goals are expressed differently in each country, and it is not obvious if they are equivalent. It is noted that work is currently in process by other groups such as NEA/CSNI/WGRisk and IAEA in this area.

Accomplishments:
Technical experts from NII, NEA, NRC and IAEA identified work that is already on-going in the safety goal and severe accident areas; and provided recommendations on whether MDEP should move forward in establishing Reference Regulatory Practices on these topics.

The subgroup considered the following as key issues in the evaluation of safety goals:

- Optimization and balancing of requirements
- Traceability from the low level goals to the top level goals

- Top level goals can be probabilistic
- Goals should cover the entire set from normal operation, abnormal operation and accidents.
- Derivation of the safety goals and how they are used to determine lower level goals

The experts noted that WENRA appears to be working on a similar task and the MDEP subgroup will interact with WENRA and other selected organizations involved in probabilistic safety goals and applications. This approach offers the potential to achieve harmonization beyond the WENRA countries with minimal potential for duplication

Next Steps:

The MDEP Policy Group considered this issue at its meeting in March 2009, and concluded that the most appropriate path forward was to continue to evaluate the issue with experts that include a broader representation of the MDEP members. This evaluation will include interactions with WENRA, Gen IV, IAEA, WGRisk, WGRNR to discuss the work that is being performed in these other groups. The experts will make recommendations to the STC on how MDEP can contribute to the ongoing work that NEA and IAEA are performing in this area.

4.7 Recommendation 7: Compare the approaches used for taking account of operating experience in regulatory reviews for new reactors

All new reactor designs claim to be improvements on previous/current designs in terms of safety and effects on the environment. An important factor in demonstrating this improvement is to consider the operational experience feedback (OEF) from similar plants, other reactors and relevant non-nuclear facilities, both within the country and internationally. The pilot project evaluation in this area showed a wide range of approaches used in different countries. It is necessary to understand these differences and how they affect the regulatory review process if use is to be made of other regulators reviews. A particular issue is the approach used by regulators when considering completely new types of reactor designs for which no direct operating experience is available. Even though there may be no directly relevant operating experience available, insights gained from operating events will still have relevance and can be used to probe the design's robustness against operational occurrences.

Specific aspects of OEF that would be evaluated include: whether the regulators specify the database(s) to be considered or this is left to the designers; how regulators require the designers to demonstrate that they have taken account of OEF; how new OEF is used to modify designs which are being or have been reviewed.

Accomplishments:

The MDEP secretariat monitored the activities of the CNRA Working Groups on Operating Experience (WGOE) and on Regulation of New Reactors (WGRNR). The chair of the CNRA/WGRNR and the chair of the MDEP STC meet several times during 2008 to discuss coordination of activities. The WGOE published a report in January 2008 on international operating experience feedback (IOEF) and developed an implementation programme to address the report's recommendations.

Next Steps:
WGRNR will act as the nodal point for interactions of the CNRA with MDEP, and will take the lead in coordinating the overall work within NEA in relation to new build including requests to and

from the CSNI and CNRA working groups. The WGRNR will determine how to use the results of the WGOE for new reactor reviews. This task was discussed at the WGRNR meeting in March 2009, and the WGRNR will report back to the STC in June 2009. MDEP will then determine whether the WGRNR task meets the goal of this recommendation.

4.8 Recommendation 8: Develop a programme to collect, share, and use construction experience feedback in regulatory reviews

New plant construction is currently underway in several countries and several are in the process of reviewing applications or assessing new reactor designs. The STC determined that sharing information concerning construction experience and inspection among the MDEP members would be helpful. The STC noted that the CNRA Working Group on the Regulation of New Reactors (WGRNR) is implementing a task related to construction experience.

Based on the CNRA initiative, a specific MDEP working group that would duplicate the efforts of the WGRNR was not created. The MDEP secretariat monitored the activities of the WGRNR and provided a forum for communicating information between the MDEP members and the WGRNR. WGRNR is developing a data base that will allow regulators to share experience during the coming new phase of construction which can be incorporated into their regulatory oversight and improving their construction inspection programmes. The database will be compatible with the IRS data base. WGRNR also proposed near and longer term activities that include interaction with MDEP and CNRA working groups. The STC supports the CNRA WGRNR activities related to construction inspections practices and experiences.

Next Steps:

The STC agreed that the collection of construction experience is adequately addressed by the CNRA WGRNR initiative, and is more appropriate handled by the CNRA because it is a long term initiative. The STC will continue to interface with the WGRNR to ensure that information is adequately communicated to, and meets the needs of, MDEP members. Therefore, this recommendation is considered closed.

NEA SECRETARIAT ACTIVITIES

4.9 Recommendation 9: Develop a legal framework and the necessary agreements that will support the free exchange of information

In order for MDEP to be successful at fulfilling its goal of leveraging the work of peer regulators in the licensing of new nuclear power plant designs, a framework must be developed that will facilitate the sharing of technical information among MDEP participants. Because each country has its own unique policies and requirements regarding the release/sharing of information, including security considerations, a framework needs to be developed that is acceptable to all participating MDEP regulators.

Status:

Terms of Reference (ToR) have been developed for the design specific working groups. The ToR includes the legal agreements for MDEP. The NEA secretariat will develop a document containing existing relevant information from the MDEP ToR, the Design Specific Working Group ToR, and the Issue Specific Working Group ToR, with the addition of explanatory text. This

document will provide the necessary basis for the MDEP framework. Following endorsement of this document by the member countries, this recommendation will be considered closed.

4.10 Recommendation 10: Establish a "library" to collect and share regulatory documents

Enhanced cooperation can be fostered through the use of modern information technology, such as, the creation and maintenance of an interactive, regulatory knowledge management system, available to all MDEP participants, for collecting and sharing information relevant to new reactor design evaluations. Such cooperation should take the form of sharing regulatory documents of common interest describing design requirements and guidance, the review process, and the inspection programme for new reactors. These documents should be provided by, and accessible to, the participating regulatory authorities. This recommendation addresses the MDEP Policy Group expectations for increased knowledge transfer among regulatory authorities.

Accomplishments:

The NEA led the effort to establish the library with oversight by the STC. NEA provided the technical support for development and maintenance of the website. The website includes a folder structure and provides for 2 levels of access which are password protected: (1) MDEP member countries, and (2) member countries participating in design specific working groups. NEA created user accounts for access to the library based on requests of the STC member for each participating country. In the near term, the working groups will send documents to NEA to add to the library. Rights to upload documents may be granted to working groups leads in the future. Publicly available documents related to MDEP are available on the MDEP page of the NEA website.

The library is ready to receive documents from all members. Each member has designated a contact within their regulatory organisation with the responsibility to identify documents to be included into the library, track library status and associated activities, and maintain contact with the NEA librarian. NEA has issued a guidance document detailing library functions, access, and use. The library documents are either in English or include an abstract in English describing the contents. NEA is pursuing a process for translating documents.

Next Steps:

Based on the successful implementation of the library and issuance of a User's Manual, this recommendation is considered closed. The STC, through the secretariat, will continue to add documents and make enhancements to improve its effectiveness. In the future, the STC will evaluate whether to make portions of the library available to all NEA countries, and which portions should be made available to the general public.

5.0 New Activities

In March 2009, the MDEP Policy Group agreed that the programme needs to continue beyond the original two year mandate to fully achieve the established goals. Therefore, MDEP will be considered a long term programme with interim results. The duration of the programme will be periodically evaluated. The MDEP will use a five year horizon for setting specific expectations, goals, and programme plans for its activities. MDEP has begun to consider the addition of new topics to be addressed by the program. The criteria that will be used in evaluating whether an activity should be undertaken as part of MDEP include:

(1) the activity is of generic interest and of safety significance to the licensing of new reactors in MDEP member countries

(2) the approach followed by the MDEP regulators is not completely similar

(3) successful completion of the activity would likely result in increased harmonization/ convergence in regulatory practices or increased cooperation within a reasonable timeframe and resource expenditures

(4) any new MDEP activity should not duplicate similar efforts that are already ongoing or are planned to be undertaken by other more –appropriate organizations such as the CNRA/WGRNR (or other NEA WGs), IAEA, GIF, WENRA, etc. except where MDEP could contribute to the ongoing work of these groups

(5) each new activity should have a lead country willing to take an active leadership role, and should have a defined product

The MDEP STC and Policy Group held discussions on potential new activities in February and March 2009. These discussions concluded that, in the near-term, the programme should focus primarily on the current MDEP topics (i.e., the two design specific working groups and the three issue-specific topics of digital instrumentation and controls, codes and standards, and vendor inspections). The Policy Group agreed:

(1) No need at this time to establish any new Working Group for specific designs.

(2) PG members interested in proposing a new working group should prepare a white paper describing how the ToR principles are met. The paper should be submitted to the STC for its review and further report to the PG, which will take the decision to move forward. One new topic, high temperature gas cooled reactors was recognized as needing near-term attention. It was agreed at the March 12 Policy Group meeting that a paper describing this proposal will be prepared.

In addition, a number of topics have been identified in which MDEP can play a significant, positive role by cooperating with current efforts in other organizations. This includes the topics of severe accidents and safety goals as discussed earlier. Therefore, the MDEP STC will search out areas where it can act as a catalyst for enhanced regulatory cooperation and convergence in other forums. The MDEP is in a unique position to effect positive change because it includes the regulatory authorities of over three quarters of the reactors world-wide and represents those agencies at the highest levels. The MDEP is using its influence to initiate change and will contribute to the success of other initiatives including those of IAEA, NEA, and WENRA.

More information can be found under:
www.nea.fr/mdep