

ICEM911

The 14th International Conference on Environmental Remediation and Radioactive Waste Management (ICEM)

Date: September 25-29, 2011

Location: Reims, France

Reims Champagne Congrès (RCC) Centre

ORGANIZED AND SPONSORED BY





ASME Web site: www.asmeconferences.org/icem2011

SFEN Web site: www.sfen.fr/icem-11













Welcome to ICEM'11

The Fourteenth International Conference on Environmental Remediation and Radioactive Waste Management (ICEM'11) is a global information exchange, featuring engineering and scientific solutions to environmental problems. More than 600 scientists, engineers, managers, project directors, business representatives, equipment vendors and government officials from more than 30 countries are expected to attend the conference, held this year in Reims, France.

The Environmental Engineering and Nuclear Engineering Divisions of the American Society of Mechanical Engineers (ASME) have joined forces with the Société Française d'Energie Nucléaire (SFEN) for ICEM'11. The conference and exhibition will offer a unique opportunity to foster cooperation and establish contacts with participants from many countries. Conference participants will be able to speak directly with peers who are reporting new research, initiating and managing environmental projects, establishing national and international regulations and applying new methods and equipment. ICEM'11 is expected to feature 300 technical papers, research presentations and discussions of field applications. A diverse group of international organizations will be exhibiting related technologies and services.

We have organized this Advance Program so you can easily find additional details on registering for the conference as well as technical tours and social programs. Take a look inside for details. We are sure you will find something of interest. We look forward to seeing you in Reims.

Honorary Co-Chairs

Mr. Christophe Béhar, Nuclear Energy Director, CEA (FRANCE)

Mr. François-Michel Gonnot, Chairman of the Board, ANDRA (FRANCE)

Ms. Neile Miller, Principal Deputy Administrator, US DOE NNSA Program (USA)

Dr. Ines Triay, Assistant Secretary, US DOE EM Program (USA)

Dr. Tero Varjoranta, Director, Division of Nuclear Fuel Cycle and Waste Technology, IAEA (Austria)

Conference General Co-Chairs

Anibal Taboas, for ASME (USA)

Dominique Greneche, for SFEN (FRANCE)

Conference Manager

Gary Benda, for ASME (USA)

We thank the following companies for sponsoring events at the ICEM'11. (Only the Sponsors at the time of printing are listed.)

— Our Platinum Sponsors —

Andra URS Corporation

— Our Silver Sponsor — Fluor Corporation

— Our Bronze Sponsor — ONET Technologies

Table of Contents

Background, Location and Contact Information	2
Objectives and Background	
Format and Deadline Dates	
Conference and Opening Session Location	
City of Reims, France	3
Contacts for More Information	
ICEM'11 Organizing Societies and Cooperating Int'l Agencies	
Associated Social Events and Guest Program	6
Registration Hours.	
Sunday Welcome Reception	
Tuesday Reception	
Wednesday Banquet	
Guest Program	
Associated Technical Events	
Major Topics	10
Participating Attendees	
Technical Training Course	10
Monday Morning Opening Session	11
Poster Sessions	
Special Panel Sessions	
Conference Proceedings on CD-ROM	13
Daily Speaker/Session Co-Chair Briefing.	
Coffee/Tea Breaks	
Lunch Periods in Exhibit Halls	
Audio Visual Office / Speaker Ready Area	
Technical Tours	
Hotel/Restaurant Listings	
Exhibition and Sponsorship	
Travel Information	
Passport / Visa Information	17
Transportation	17
Insurance / Liability	18
Currency	18
Acronym List	
Reims City Site Map	20
Reims Train Station to Reims Champagne Congrès (RCC) Centre	20
Reims Road Map and Hotel Locatins	21
Reims Champagne Congrès (RCC) Centre Maps	
Exhibit Hall Layout	
Technical Program at a Glance	
Approximate Presentation Times	28
Technical Program Descriptions - Sessions 1-9	29-33
Conference Registration Procedures and Forms	
Technical Program Descriptions - Sessions 9-60	
Technical Program Organizers	
Session Organizers	
Conference Steering Committee	
Tentative Schedule of Events	73

Background, Location and Contact Information

Objectives and Background

The fourteenth International Conference on Environmental Remediation and Radioactive Waste Management (ICEM) promotes a broad global exchange of information on technologies, operations, management approaches, economics, and public policies in the critical areas of environmental remediation and radioactive waste management. The conference provides a unique opportunity to foster cooperation among specialists from countries with mature environmental management programs and those from countries with emerging programs. Attendees will include scientists, engineers, technology developers, equipment suppliers, government officials, utility representatives and owners of environmental problems.

ICEM'11 is the fourteenth in a series of biennial international conferences on environmental remediation and radioactive waste management organized by ASME. The first conference was held in Hong Kong in 1987, followed by Kyoto, Japan; Seoul, Korea; Prague, Czech Republic; Berlin, Germany; Singapore; Nagoya, Japan; Bruges, Belgium; Oxford, England; Glasgow, Scotland; Liverpool, UK; and Tsukuba, Japan in 2010. The ICEM conferences benefit from worldwide participation from more than 30 countries.

Format and Deadline Dates

The technical program includes an opening plenary session and five parallel program tracks with seven concurrent sessions. The sessions include 25-minute oral presentations, panels, workshops, and poster displays that are designed to enhance dialogue between presenters and participants.

The Five Primary Tracks are:

- 1. Low/Intermediate-Level (L/ILW) Radioactive Waste Management
- 2. Spent Fuel, Fissile Material, Transuranic (TRU) and High-Level Radioactive Waste (HLW) Management
- 3. Facility Decontamination and Decommissioning (D&D)
- 4. Environmental Remediation (ER)
- 5. Environmental Management (EM)/Public Involvement/Crosscutting Issues/Global Partnering

All oral and/or poster presentations with papers will need to follow the below deadline dates.

- May 27, 2011 Authors Submittal of "Full Draft Paper",
- June 24, 2011 Reviewer Comments Returned
- July 22, 2011 Final Submittal of Authors: Abstract, Paper and Copyrights

All oral and/or poster presentations without papers will need to fully register by: May 31, 2011 to be incorporated in our final program.

Conference and Opening Session Location

ICEM'11 will be held at the Reims Champagne Congrès (RCC) Centre in the Champagne-Ardenne region of northeastern France. Reims is approximately one hour east of the Charles De Gaulle Airport in Paris -- easily accessible by car and rail. Reims promises a unique experience as one of France's most vibrant cities. Reims has three sites listed as UNESCO World Heritage. It also offers elegant Art Deco facades, refined Champagne Houses, and a relaxed atmosphere which prevails in the streets and café-terraces. Additional details are available at http://reims-tourism.com. The RCC Centre is located at: 12 Boulevard Général Leclerc, 51722 Reims Cedex - France.

The Opening Session will take place at the RCC on Monday morning with the keynote presentations setting the stage for this year's conference. Following the Opening Session, lunch will be served in the Exhibit Hall to all conference participants.

City of Reims

Reims, the home of champagne (the most celebrated and celebrating wine in the world), is the main city of the champagne area. It is a charming city, and one that the French hold dear to their hearts. In Reims stands one of the most beautiful buildings of the Middle Ages in Europe, one that is filled with history: Notre-Dame de Reims. The baptism of Clovis, around the year 498, gave birth to the Kingdom of the Franks, where the cathedral now stands. In 816 at the cathedral took place the first royal coronation in Reims, the one of Louis le Pious. This exceptional event explains the choice of Reims as the coronation city. Almost all French kings were crowned there for about 1,000 years.

The Reims city centres are easily accessible by rail and car and are fairly small and easily walk able, with many streets for pedestrians only. The Reims Champagne Congrès (RCC) Centre is easily accessed by foot or car from nearby hotels.

Reims, and surrounding Épernay and Ay are the main places of champagne production. Many of the largest champagne producing houses, referred to as les grandes marques, have their head office in Reims. Most are open for champagne tasting and tours by appointment only. Champagne is aged in the many chalk caves and tunnels, some originating in the Roman period, located deep inside the ground.

Contacts For More Information

For questions on the conference organization, sponsorship, vendors or international liaisons contact:

Gary Benda

Conference Manager Phone: +1(803) 345-2170 E-mail: GBenda use@hotmail.com **Bernard Jolly**

European Event Manager Phone: +33 (0)1 53 58 32 25 E-mail: bjolly@sfen.fr

Anibal Taboas

General Co-Chair Phone: +1(630) 287-0026 E-mail: TaboasA2@ASME.org Dominique Grenêche

General Co-Chair Phone: +33 1 69 01 62 15

E-mail:

dgreneche.nuclearconsulting@orange.fr

For questions concerning Reims, France and other local aspects, conference facilities, social programs, vendor arrangements, European Union (EU) vendor exhibition or EU conference registration contact:

Sylvie Delaplace

European Coordinator, SFEN 5 rue des Morillons F75015 Paris

Phone: +33 (0)1 53 58 32 16 Fax: +33 (0) 1 53 58 32 11 Email: icem11.france@sfen.fr

For questions on the Technical Program, non-EU conference registration or non-European Union vendor exhibition contact:

Shari Brabham

CISS Corporation P.O. Box 57296

Tucson, AZ 85732-7296 Phone: +1(520) 571-6047 Fax: +1(520) 445-8011 E-mail: cisscorp@gmail.com

For questions on the submission of abstracts or papers contact:

Stacey Cooper

ASME Publishing Three Park Avenue, 22S1 New York, NY 10016-5990 Phone: +1(212) 591-7788

Fax: +1(212) 591-7292 E-mail: CooperSL@asme.org

> Visit the ICEM Web Page for up to date information at www.asmeconferences.org/icem2011 www.sfen.fr/icem-11

ICEM'11 Organizing Societies and Cooperating International Agencies

U.S. Societies

The Environmental Engineering Division and the Nuclear Engineering Division of ASME are the primary organizing societies of the ICEM conference. Since its inception in 1987, the original as well as current objective has been to conduct international conferences on key environmental management topics in locations convenient to large numbers of technical experts from emerging environmental programs. ASME is committed to continue to provide this global conference wherever the greatest need and interest are shown.

ICEM'11 is also organized to support the US Department of Energy (US DOE), the US Nuclear Regulatory Commission (US NRC) and the US Environmental Protection Agency (US EPA) along with several other major international technical societies and governmental organizations. Each agency has had significant involvement with the ICEM series. The US DOE is responsible for managing the wastes and cleaning the sites from the past US government nuclear operations, thus the US DOE staff has viewed this conference series as an opportunity to identify new technical solutions and to provide information on the results of their programs to the international community. Federal regulatory participants from both the US EPA and US NRC have also been active in program development and participation.

European Societies

The ICEM conferences have always been conducted jointly with a major local technical society and other co-societies in the host country. For ICEM'11, the Société Française d'Energie Nucléaire (SFEN) will help partner in the organization of this conference along with OECD (Organisation for Economic Co-operation and Development) and the Nuclear Energy Agency.

Cooperating International Agencies

Since the beginning, the ICEM meetings have been held in cooperation with major international organizations responsible for programs and research in radioactive waste management and environmental remediation fields. The International Atomic Energy Agency (IAEA) has been assisting this conference in several ways. Their support has included assistance in the technical program preparation, presentation of technical papers and other agency information, promotion of the conference to their member states, and providing financial and technical assistance.

Associated Social Events and Guest Program

Social Events

The conference registration fee includes lunch for three days (Monday to Wednesday), the Sunday Welcome Reception sponsored by URS and the Tuesday Reception sponsored by Andra. Tickets for the Conference Banquet on Wednesday are optional and are charged at a nominal price. Please note space is limited and tickets will be issued on a first-come first-served basis.

Onsite Registration Hours

It is strongly recommended that the conference participants register on Sunday, September 25, 2011 to avoid the rush before the Opening Session Monday morning, September 26, 2011. Badges are required for the Sunday Reception. The registration desk will be situated on the 1st floor lobby of the Reims Champagne Congrès (RCC) Centre.

Listed below are the scheduled Onsite Registration Hours.

Sunday, September 25, 2011	4:00pm to 7:00pm
Monday, September 26, 2011	7:15am to 6:00pm
Tuesday, September 27, 2011	7:15am to 6:00pm
Wednesday, September 28, 2011	7:15am to 6:00pm
Thursday, September 29, 2011	7:15am to 12:30pm

Sunday Welcome Reception - Sponsored by URS; Platinum Sponsor

All conference participants are invited to attend the Welcome Reception at the RCC on Sunday from 6:00pm to 7:30pm in the registration area. Attendance is included in the conference registration fee. Guests are welcome to purchase a ticket, prices start at EUR $\mbox{\ensuremath{\in}}20$ (USD \$28) plus VAT. Delegate badges are required to gain entry and will be available at the registration desk between 4:00pm - 7:00pm.

Tuesday Reception - Sponsored by Andra, Platinum Sponsor

In order to celebrate, Andra's 20th Anniversary, Ms. Marie-Claude Dupuis, Chief Executive Officer is pleased to invite all of the participants of ICEM 2011 to a buffet on Tuesday evening, 27 September 2011. This reception is sponsored by Andra for all registrants and will be held from 6:00 to 7:30pm in the Exhibit Hall. They look forward to seeing everyone there to celebrate this anniversary. Please take this opportunity to review, evaluate and test the current products and services of the exhibiting companies. Guests are welcome to purchase a ticket, prices start at EUR €20 (USD \$28) plus VAT. Delegate badges are required to gain entry.

Wednesday Banquet

The entertainment hallmark of the ICEM conference is the traditional and culturally festive banquet, reflective of the host country. This year's ICEM 2011 Banquet will be held at the Champagne De Castelnau Caveau.

The ICEM Conference Banquet is an optional extra, but truly memorable. There is a nominal cost to attend starting at EUR €40 (USD \$56) plus VAT for fully registered conference participants, and at EUR €60 (USD \$85) plus VAT for Guests. Tickets and badges will be required to gain entrance.

Guest Program

ICEM will sponsor a Guest Welcome Reception on Monday morning at 8:00 to be acquainted with and review Reims options hosted by Dianne Benda. This will be open to all guests. Guests are primarily family members, over the age of 16, of ICEM paid registrants.

All Tours unless otherwise noted are accompanied by an English Speaking guide and will depart from and return to the RCC.

Sunday, 25th September

Golf Tournament at Le Golf de Reims Champagne

Golf de Reims Champagne is an international golf course to the extent of professional and amateur champions, open every day of the year. Golf is located in the center of the Champagne vineyards you enjoy the blessings of nature and knowledge of our great houses of Champagne.

Golf de Reims has many elevated greens, defended by bunkers and the greens fast enough (2.50 to 3.00 m in a speed-meter). The 6,600-yard, par-72 golf course was founded in 1928 and its maturity shows through, with high quality putting surfaces and great conditioning of tees and fairways.

Materials required for each participant 1) Handicap number indicating your level depending on a journey. It takes into account the index of the player and the level of difficulty of the course, depending on the selected departure areas and 2) Golf equipment.

The course is located in a sleepy village just under 10 minutes from Reims. All in all, this course provides a very pleasant game of golf for beginners and experts alike. Prices including transportation is at €120 (USD \$170) plus VAT for lunch, cart and green fees. We are trying to identify a sponsor and also determine transportation arrangements. Additional information can be found at http://www.golf-de-reims.com/diaporama.html.

Guest Tours

Plan to come early for the weekend and enjoy the beauty and hospitality France has to offer. Centrally located, Reims it is an easy train ride to and from Paris, Belgium, and Amsterdam. Many local towns and historical sites are just minutes away.

Guided Tour #1- Day Tour to Paris, 9:00am to 5:00pm, 100 € (\$140 USD)

On Sunday, we are organizing a group to travel by train from Reims to Paris and enjoy the local area. At the Paris East train station, we will board a Hop On – Hope Off bus for a 4 hour city tour. We will hop off at Notre Dame, The Eiffel Tower and at the Place d'Concorde and you will be able to have lunch on one of the stops on your own. After our tour of the highlights of Paris we will re-board the train at 4:00pm in time to return to the RCC for the Sunday reception, Cost include roundtrip train, guide and tour bus.

Monday, 26th September

Guided Tour #2A - Walking Tour of Reims, 9:00 – 12:00 pm, 20 € (\$28 USD)

Circus School, Paris and Mars Gates, Forum and Royal Square, Notre Dame with Guide. Sights include;

- Hard Built Circus and Riding School 19th century, now renovated and used for shows
- The Paris Gate built for the coronation of Louis XVI in 1775
- The Gate of Mars one of the four arches built ca. 200 AD to mark the four main thoroughfares of Durocortorum, capital of the Roman province of Belgica.
- The City Hall typical of 17th century architecture. The facade bears an equestrian statue of King Louis XIII in its centre
- The Forum Square located on the site of the antique forum, this square was the market place, Gallo-roman Cryptoporticus (semi-subterranean gallery) and the Le Vergeur House Museum,
- The Royale Square ca. 1760, the square was built by the population as a tribute to Louis XV. In its centre, stands a statue of the king surrounded by a series of symbolic decorative figures by Pigalle.
- The Notre-Dame Cathedral a master-piece of gothic art, the Cathedral of Our Lady was started in 1211. It was the Cathedral of the Coronations for French Kings in memory of the baptism of Clovis by Saint Remi on Christmas Day 498

Guided Tour #2B - Walking Tour of Reims, 2:15 – 6:00 pm, 35 € (\$49 USD) The Basilica St-Remi and Champagne Cellars Taittinger, with Guide. Sights include:

- **Basilica Saint-Remi** The largest Romanesque pilgrimage church in northern France. It was built as a shrine to Saint Remi. The nave was consecrated in 1049 whereas the apse was built in the late 12th century.
- Visit of Champagne Cellars Taittinger Located in the heart of Reims, between City Hall and the Cathedral, the Demeure des Comtes de Champagne makes the historical heritage of the city. Built in the 13th century, and partially destroyed during the First World War, it was restored under the direction of the Fine Arts Ministry. The tour will be concluded by a Champagne tasting. Price includes entrance fee to the champagne house.

Tuesday, 27th September

Guided Tour #3 - Visit of the Champagne Vineyard by Coach and Lunch Cruise near Epernay on the Marne River, 9:30am - 5:00pm 80 € (\$112 USD)

• Travel through the Champagne Vineyards - For the past three centuries, the passion of the men of Champagne and their respect for local traditions have resulted in the exceptional wines that are famous around the world for their subtle and delicate bouquet.

- Meeting at Cumières for Lunch Cruise The jetty is located in the small village of Cumières, near Epernay. You will sail on a sternwheeler between the vineyard covered slopes and the viticol villages nested on hillsides. After the lock, different species of birds will escort you to the doors of the Valley of the River Marne. All the history of the region seems to spring at each turn of the river: the castle of the famous Veuve Clicquot, Dom Perignon, the revolt of the wine-growers in 1911, the Duchess of Uzes, and so on.
- End Of The Cruise And Travel To Hautvillers Village On the outskirts of Epernay, a small village known around the world thanks to a Benedictine monk named Dom Pérignon, is perched on sunny vine planted hillsides. The legend of Dom Pérignon adds an intangible but no less genuine aura to Hautvillers. He is said to have been able to make a "grey" or red still Champagne wine into a sparkling wine of perfect clarity. Dom Pérignon is buried in the village church. The tour will include a champagne toasting.

Wednesday, 28th September

Guided Tour #4 - The Old City of Troyes and Shopping Outlet by Coach, 9:00am -5:30pm 70 € (\$98 USD)

- Troyes Travel by bus to see the Champagne Fairs and the Saint-Jean-au-Marché quarter. It is mainly in the urban fabric that the memory of the great Champagne Fairs can be found, fairs that were held in the city of Troyes during the festival of Saint Vincent and Saint Remi. The confusion of streets and small squares with closed courtyards give an idea of the city at this period.
- Cathedral of Saint Peter and Saint Paul This cathedral was built between the 13th and 15th centuries and is characteristic of the Gothic style. Only the Saint Peter tower was completed the Saint Paul tower has remained unfinished since 1545.
- The Saint-Pantaleon Church, the Parish of the Polish Community of Troyes - Built on the site of a synagogue (according to tradition), a genuine museum of 16th century Troyes statuary, since it was the hiding place for statues saved during the French Revolution. Some were created by Dominique le Florentin, an artist from Troyes and decorator for François 1st.
- Shopping Factory and Trade Outlets -Troyes Designer Outlet is the first of McArthurGlen's discount outlet malls in France, having opened in 1995. It's not surprising that McArthurGlen chose this city as the location for their designer outlet as Troyes' association with textile manufacture and knitting go back to the 12th century. The Marque Avenue and Marques City outlets will also be visited. Here you'll find 210 top fashion names.

Thursday, 29th September

Guided Tour #5 - Walking Tour of Reims, 2:15 – 6:00 pm, 35 € (\$49 USD).

The Basilica St-Remi and Champagne Cellars Taittinger with Guide. This is the same tour as Monday afternoon Tour #2B, but provides the guest in sessions all week a second opportunity to see and taste at little of Reims and the Champagne region.

Associated Technical Events

Major Topics

The ICEM'11 Technical Program is divided into 60 technical sessions conducted over three and a half days. A listing of the specific sessions within each of the five technical programs can be found in the "Program at a Glance" Section.

Participating Attendees

300 abstracts have been accepted from more than 30 countries, including submittals from Western Europe, Central and Eastern Europe, the Far and Middle East, North and South America and Australia. This strong technical program is expected to draw more than 600 scientists, engineers, managers, project directors, utility and other business representatives, equipment vendors and government officials from around the world.

The traditionally strong participation from countries with mature environmental programs will be supplemented by a contingent of attendees from Central and Eastern Europe, as well as key representatives from other countries from around the world with emerging programs. In the past, the ICEM meetings have allowed participants to exchange technical information, discover solutions to problems and make valuable business contacts or even arrange business agreements.

Technical Training Course: Risk Reduction in Remediation, Waste Management and Decommissioning

Sunday, September 25, 2011, 9:00 AM – 4:00 PM, Reims Champagne Congrès (RCC) center, 145 € (\$195 USD)

This workshop is intended as a condensed but intense training in the subject area of risk reduction for nuclear remediation, radioactive waste management and decommissioning of nuclear reactors and facilities. Topics covered will include risk assessment, risk reduction methodologies, risk vs. cost, and practical lessons from various projects. Technical experts from the industry and senior leaders from international organizations will be invited as lecturers. The workshop will be directed by Dr. Jas Devgun.

The workshop is being held as a service to the ICEM community and is relevant to all technical program attendees as well as other professionals in the nuclear field. The ICEM meeting is sponsored by ASME and the SEFN. To partially defray costs, a nominal fee is required for attending the workshop. Please check appropriate box on the registration form. Participants will receive a certificate of training completion. Professional education credits may be available from ASME, IHMM or other organizations. The agenda consists of six hours of intense instruction with one hour lunch break. Refreshments for coffee breaks will be provided.

Monday Morning Opening Session at the RCC

The Opening Session will begin Monday morning with the keynote presentations setting the theme for this year's conference. Coffee will be served in the exhibit hall from 08:00 until the program begins at 9:00. The welcome speakers and keynote speakers are:

- Mr. François-Michel Gonnot Chairman of the Board, Andra (FRANCE)
- ❖ Dr. Ines Triay Assistant Secretary, US DOE EM Program (USA)
- Mr. Christophe Béhar Nuclear Energy Director, CEA (FRANCE)
- Ms. Neile Miller Principal Deputy Administrator, US DOE NNSA Program (USA)
- Dr. Tero Varjoranta Director, Division of Nuclear Fuel Cycle and Waste Technology, IAEA (AUSTRIA)

Poster Sessions

The conference technical program will contain three major Poster Sessions on Monday - Wednesday arranged from the five Technical Tracks. The leading objective for the poster sessions is to provide a forum for experts in the field and interested attendees to gather for a half day in the RCC where they can move around freely and engage in discussions, which would normally not be possible during the oral sessions. The best three Posters from each Track will be displayed on Thursday morning.

Special Panel Sessions

Listed below are a brief summary on the ICEM2011 panels. A more comprehensive and detailed description and the panelists are listed in the Technical Program section with each Session.

EM - Track 5: Approaches for International Collaboration (Session 2)

This panel will provide an overview of the different approaches and initiatives used to promote international collaboration in environmental remediation and radioactive waste management, with a focus on the challenges and opportunities unique to each country and organization.

D&D - Track 3: Lessons Learned: Chernobyl Twenty-Five Years Later - TMI & Other Experiences (Session 3)

This panel will discuss the status, challenges, and lessons learned from confinement activities and decommissioning activities as well as lessons learned from Chernobyl and other nuclear industry recovery experiences such as Three Mile Island.

LLW - Track 1: Emerging Issues in the Management of I/ILLW (Session 10)

This panel will focus on strategies for the management of all low and intermediate level waste (L/ILW). Based on experience in different national programs, it will discuss various options and their merits for managing L/ILW.

ER - Track 4: How can Networks Improve the Implementation of ER Projects? The IAEA Network on Environmental Management and Remediation-ENVIRONET (Session 11)

This panel introduces and discusses the IAEA's Network on Environmental Management and Remediation - ENVIRONET. Panellists will be from various countries using ENVIRONET.

LLW - Track 1: Challenges When Selecting Disposal Options in the Light of the New IAEA Classification Scheme (Session 20)

This panel will provide a forum for the exchange of scientific and technical information on disposal of different categories of radioactive waste with focus on current approaches. It will begin with individual presentations and conclude with a panel.

HLW - Track 2: Contribution and Complementarities of Interim Storage, Geological Disposal, Partitioning & Transmutation Reversibility Regarding Global Optimization of Radwaste Management (Session 21 & 22)

The first panel will address the status of HLW and Spent Fuel interim storage, processing and national programs. Partitioning and transmutation are also investigated in several countries.

The second panel will discuss final disposition and geological disposal issues since it is internationally recognized as the reference option for long term management of high level and TRU waste, or non reprocessed spent fuel.

D&D - Track 3: Decommissioning Work At The OECD/Nuclear Energy Agency (Session 29)

This session will start with presentations and conclude with a panel session on the OECD/NEA activities. Details of these presentations are listed in Session 29.

EM - Track 5: Young Generation Network (YGN) and Professional Development Programs (Session 38)

A general YGN Meeting will be conducted to canvas views of the younger members of the industry, exchange knowledge across companies, and grow the YGN network through the conference attendees.

ER - Track 4: Radium Remediation - Historical Perspectives and Current Circumstances (Session 48)

An international panel will discuss and compare progress and history of national radium remediation programs. Lessons learned will be featured and shared. The outlook for the final closure on this issue worldwide will also be addressed.

EM - Track 5: Communications and Knowledge Management - (Session 49 and 50)

These two panels will provide strategies and lessons learned regarding general communications and knowledge management to a wide variety of target audiences, and discuss the earlier presentations.

EM -Track 5: Global Partnerships in Environmental Management – Part 2 of 2 (Session 54)

This panel will provide a global perspective on the status of the clean-up of nuclear legacy sites in the North West and Far East Russia and lessons learned by key participants of the Global Partnership Program.

Conference Proceedings on CD-ROM

Each conference registrant will receive the conference proceedings on a CD-ROM mailed approximately six months after the conference. Additional proceedings may be ordered at an additional charge, by writing to the ASME Order Department, 22 Law Drive, P.O. Box 2300, Fairfield, NJ 07007-2300, U.S.A., Telephone 1-800-THE-ASME.

Daily Speaker/Session Co-Chair Briefing

A morning briefing will be provided to all Speakers, Panelists, Poster Presenters, and Session Co-Chairs on the day of their session. The briefing will include coffee, and tea and will be served at the conference center. Most hotels have breakfast included in the cost of the room, but the speaker's briefing will give you the time for final arrangements before your session. The attendance at the briefing will provide an opportunity for the Session Co-Chairs to meet with the speakers, and for all to discuss the topics they will be addressing.

Coffee/Tea Breaks

Complimentary coffee and tea will be served for all meeting participants in the Exhibit Hall during the morning and the afternoon breaks each day of the conference.

Lunch Periods

Lunch will be served in the Exhibit Hall on Monday, Tuesday and Wednesday. Luncheon hours are from 12:30-1:40pm. Paid full week registration includes the luncheon price for all three days. If you prefer, there are also several local restaurants near the conference center. A listing of local restaurants can be found at http://www.reims-tourisme.com/a copy of which will be given to delegates upon arrival.

AV Office / Speaker Ready Area

The AV Office/ Speaker Ready area will be available for speakers to load and review their PowerPoint slides. This area will be open from Monday to Wednesday from 7:00am - 5:00pm and Thursday from 7:00am - 12:30pm at the RCC Centre.

Technical Tours on Friday

Three technical tours are planned to see Andra and Chooz D&D project radioactive waste management programs first hand. The tours will take place immediately after the conference on Friday. Please Note: Tours will depart on Friday at 7:00 am at the RCC centre. Tours are based on a minimum attendance and will be evaluated on August 26 on their viability.

All technical tours for ICEM'11 are space limited and require early security clearances. Paperwork for security clearances must be received by August 26, 2011. We strive to keep the costs of these excellent tours at a minimum resulting with many on our waiting lists. Regrettably, for our past ICEM tours, we have had numerous last minute cancellations with insufficient time to process the security clearance for individuals on the waiting list. To assist space for the attendees who strongly desire to attend, we are implementing for ICEM'11 an additional tour deposit of $100 \in (\$140 \text{ USD})$. A credit for the additional amount will be sent after the conference if you attend your technical tour but will be forfeited with the tour fee if you cancel. The cancellation fee will be waived for justified cancellations approved by the ICEM Finance Committee.

For additional information on any of these tours please contact: Sylvie Delaplace, European Coordinator French Nuclear Energy Society (SFEN) Phone: +33 (0)1 53 58 32 16 • Fax: +33 (0) 1 53 58 32 11 Email: icem11.france@sfen.fr

Friday - Technical Tour 1A: Reims to Andra, LLW Site Tour (7:00am to 7:00pm) Return to Reims, 120 ϵ (\$168 USD). Cost includes lunch and transportation from the RCC.

- The Disposal Facility For Low-Level And Intermediate-Level (LIL) Waste The LIL-Waste Disposal Facility is located in the Aube District. Spreading over an area of 95 ha, it is the second disposal facility to be built in France. The facility, which accommodates LIL short-lived waste, has been operated by Andra since 1992. All residues intended for disposal here are conditioned in concrete or metal packages, before being emplaced in reinforced-concrete structures. Once the total authorised capacity will be reached, the facility will continue to be monitored for at least 300 years.
- The Disposal Facility For Very-Low-Level (VLL) Waste Implemented since 2003 only a few kilometres from the LIL Facility, the VLL-Waste Disposal Facility extends over an area of 45 ha. Residues here originate essentially from dismantling operations and are disposed of in shallow cells excavated at a few metres' depth within the clay formation.

Friday - Technical Tour 1B: Reims to Andra, HLW Site Tour (7:00am to 7:00pm) Return to Reims, $120 \in (\$168 \text{ USD})$. Cost includes lunch and transportation from the RCC.

- The Underground Laboratory Implemented in the village of Bure (Meuse District) since 2000, the Underground Laboratory constitutes a unique tool in France. Its drift network, located at about 500 m deep into the ground, is designed for scientists to observe and to study the geological environment directly and in real-time. Experiments have been conducted here since 2004 in order to acquire information on the properties of the surrounding rock and to understand how it will react to the construction of installations and to the disposal of radioactive waste.
- Saudron's Technological Centre The purpose of the Technological Centre, which is located in the nearby village of Saudron (Haute-Marne District), is to allow the public to discover the project for a deep geological repository through an exhibit of various industrial mock-ups, robots and

prototypes realised by Andra. In parallel to scientific studies, Andra is also conducting technical investigations notably on equipment likely to be implemented in the future deep geological waste repository.

Friday - D&D Technical Tour B: Reims to Chooz (7:00am to 7:00pm) - Return to Reims; 120 € (\$168 USD)

Standing on the banks of the River Meuse in the Ardennes, Chooz nuclear power station has three pressurized water reactors (PWR). Two reactor units are currently in operation (Chooz B), while the first unit, Chooz A, was permanently shut down in 1991. The very first PWR unit in France, Chooz A is the product of a partnership between EDF and a consortium of Belgian power utilities, who decided to set up the SENA (Société d'Énergie Nucléaire des Ardennes). With a capacity of 320 MW, plant operations started in 1967 and ended in 1991.

At the end of operations, the plant will remain under surveillance for several years. Watersheds inside the caverns will be collected and tested until their radioactivity levels enable them to be discharged without being tested first. Once these levels are reached, the final components remaining in the nuclear auxiliary cavern and the waste treatment facility will be dismantled. Buildings forming part of the outside platform will then be decontaminated and demolished, and the site will be completely regenerated. The site's future Decommissioning operations are expected to be completed by 2020-2025.

Hotel/Restaurant Listings

Hotel Listing

ICEM has teamed with the Reims Tourism Board to assist in room accommodations. Participants who wish to make a reservation for hotel accommodations with can apply by filling out the registration form listed on-line at www.asmeconferences.org/icem2011. These reservations should be made as soon as possible but no later than August 26, 2011. After this date we can no longer guarantee hotel reservations since September is the harvest season and a very busy period for all hotels in Reims. The approximate rates listed below also included VAT and breakfast each morning.

On the hotel chart you will see a number (#) listed beside each hotel name, this number represents a correlation number on the map located on page 21. This map shows where each hotel is in proximity to the Reims Champagne Congres Center. Also listed on this chart is a star rating system as recommended by the Reims Tourism Board (the more stars, the better the accommodation and amenities are).

Reims Tourism Board will require a credit card to secure your hotel arrangements. A sufficient number of rooms will be provided at hotels near the conference site. Please indicate your hotel preferences. Your room will be assigned on a first-come, first served basis. If your room request is unavailable, you will be assigned to your next choice. They will send you a confirmation of your reservation.

The ICEM'11 Committee is not responsible for any violations of any ordinances, and all other claims of losses, costs, and damages arising from the attendee's occupancy at any of the local hotels.

# HOTEL NAME / ADDRESS STATUS	RATE / WALKING TIME
11 Best Western − Hotel de la Paix ★★★ 9 rue Buirette, 51100 Reims	Single-Double-Twin: 160 € / night Headquarter Hotel under 5 minutes
06 Holiday Inn Garden Court ★★★ 46 Rue Buitrette, 51100 Reims	Single-Double-Twin: 150 € / night 5 minutes
22 Express by Holiday Inn ★★ Boulevard Paul Doumer 21, 51100 Reims	Single-Double-Twin: 95 € / night 5 minutes
07 Mercure Cathedrale Hotel ★★★ 31 Boulevard Paul Doumer, 51100 Reims	Single-Double: From 149 € to 154 € / night 8 minutes
05 Grand Hotel Continental ★★★ 93 Place Drouet Erlon, 51100 Reims	Single-Double-Twin: From 68 € to 155 € / night 10 minutes
13 Quality Hotel ★★★ 37 Boulevard Paul Doumer, 51100 Reims	Single-Double-Twin: From 115 € to 135 € / night 10 minutes
16 Bristol Hotel ★★ 76 place Drouet d'Erlon, 51100 Reims	Single: 89 € / night 10 minutes
21 Hotel du Grand Nord ★★ 75 Place Drouet, 51100 Reims	Single-Double-Twin: 81 € / night 10 minutes
20 Hotel Crystal ★★ 86, place Drouet d'Erlon, 51100 Reims	Single-Double: From 68 € to 69 € / night 10 minutes
14 Grand Hotel de l'Univers ★★★ 41 Boulevard Foch, 51100 Reims	Single-Double-Twin: From 102 € to 112 € / night 15 minutes
04 Kyriad Reims Center ★★★ 7-9 rue du Général Sarrail, 51100 Reims	Single: 95 € / night 15 minutes
23 Ibis Centre Reims ** 28 boulevard Joffre, 51100 Reims	Single-Double-Twin: 79 €/ night 15 minutes
12 Hotel Porte Mars ★★★ 2 place de la République, 51100 Reims	Single-Double-Twin: From 115 € to 130 € / night 20 minutes
29 Résidence Clairmarais ★★★ 25 Rue Edouard Mignot, 51100 Reims	Single-Double: From 68 € to 81 € / night 25 minutes
03 Grand Hotel des Templiers **** 22 rue des Templiers, 51100 Reims	Single-Double-Twin: 190 € / night 25 minutes
28 Suite Hotel *** 1 rue Edouart Mignot, 51100 Reims	Single-Double-Twin: 130 € / night 25 minutes

Restaurant Listing - Eating out in Reims City Region

During the day, delegates can enjoy the numerous bars and restaurants down the avenue from the conference centre.

During the night, come celebrate with us and indulge in Reim's best restaurants, cafes and bars. The area continues to astound with new and ever evolving imaginative food offerings which highlight the fantastic diversity this city has to offer. If you cannot decide where to eat check out http://www.reims-tourism.com/which can guide you to some of the best places to eat in the area.

Exhibition and Sponsorship

Exhibition

Attending this conference as an exhibitor will give you all the advantages gained from the conference experience, plus the chance to promote your latest products and services to a highly specialized and targeted audience of delegates. This is a significant opportunity to enhance your international market and highlight your company with international experts including scientists, engineers, technology

developers, equipment suppliers, government official, utility representatives and owners of environmental problems. These attendees are the individuals who will purchase, and/or recommend products and services for purchase, for their companies and clients. We expect over 600 international experts, from more than 30 countries. **Please Note:** Space is Limited.

The Sponsorship and Exhibition Brochure can be found on our web page at www.asmeconferences.org/icem2011

For more information, please contact:

Sylvie Delaplace, European Coordinator, SFEN Phone: +33 (0)1 53 58 32 16; Email: icem11.france@sfen.fr

Note: Each Exhibitor Attendee must pay for a Technical Registration unless you are using utilizing one of the complimentary pass (passes) provided with your booth and/or sponsorship package.

Travel Information

Passport and Visa Information

All foreign visitors entering France must possess valid passports. In addition, the visitors may need a visa. The organizers advise the participants from the countries other than those listed below to consult with the France Embassy or a local diplomatic mission for further information. ICEM will assist in Letters of Invitations until July 31st. After that date, it is doubtful that approval will be granted for late issued invitations. Visa is not required for the participants from the following countries: Andorra, Argentina, Australia, Austria, Bahamas, Barbados, Belgium, Canada, Chile, Colombia, Costa Rica, Croatia, Cyprus, Czech Republic, Denmark, Dominican Republic, El Salvador, Finland, FYROM, Germany, Greece, Guatemala, Guyana, Honduras, Mexico, Hungary, Iceland, Ireland, Israel, Italy, Lesotho, Liechtenstein, Luxembourg, Malta, Mauritius, Netherlands, New Zealand, Norway, Portugal, San Marino, Singapore, Slovenia, Spain, Suriname, Sweden, Switzerland, Tunisia, Turkey, United Kingdom, United States of America, Uruguay.

Transportation by Air to Reims, France

The Paris Charles De Gaulle International Airport provides direct access to and from major European and North American cities and is a 50 minute drive from Reims. Reims is also located 30 mins. from the Paris Roissy international airport. Paris airports: www.adp.frl

Several companies also offer connections to these airports. Reims-Prunay aerodrome: Light business and tourist aircraft or Phone: +33 (0)3 26 49 10 92

Transportation by Rail to Reims

The easiest way to get to Reims from the airport is by train. Reims is located at the junction of the Lille - Dijon - Mediterranean and Paris - Charleville - Sedan lines with 12 daily links between Reims-Paris. A TGV high-speed train links Reims to Paris in 45 mins. Travelers coming from Lille or Paris airport arrive at Champagne Ardenne TGV station, around 3 miles (5km) outside Reims. Regular local train services connect to Reims city station. To consult the times and reserve your ticket: www.sncf.com or www.tgvesteuropeen.com.

Transportation by Car to Reims

Reims is located at the crossroads of the A4-E50 (Paris - Strasbourg) and A26-E17 (Calais - Troyes - Dijon) motorways. The city has 6 motorway exits. To determine a specific route visit: www.viamichelin.com

Insurance and Liability

All participants are encouraged to make their own arrangements for health and travel insurance. Neither ASME, Société Française d'Energie Nucléaire (SFEN) nor their agents, can be held responsible for any personal injury, loss, damage, accident to private property or additional expenses incurred because of delays or changes in air, rail, sea, road or other services, strikes, sickness, weather or any other cause.

Foreign Exchange and Traveler's Cheques

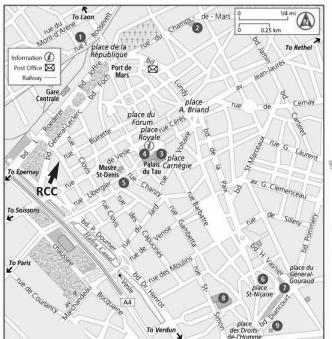
The conference secretary on-site will accept only EURs (no US\$ or Traveler's Cheques) for payment of any registration or optional ticket fees. Visa, American Express, and MasterCard are also accepted.

Acronym List

Atomic Energy Agency	NDA	Nuclear Decommissioning Authority
As Low As Reasonably Achievable	NEA	Nuclear Energy Agency
American Society of Mechanical Engineers	NED	Nuclear Engineering Division
Boiling Water Reactor	NEI	Nuclear Energy Institute
Commissariat a l'Energie Atomique	NEPA	National Environmental Policy Act
Comprehensive Environmental Response,	NI NI	Nuclear Institute
	NNSA	National Nuclear Security Administration
	NORM	Natural Occurring Radioactive Material
Dry Activated Waste	NPO	Nuclear Power Operations
Defense Nuclear Facilities Safety Board	NPP	Nuclear Power Plant
Department of Energy	NWPA	Nuclear Waste Policy Act
Environmental Impact Statement	OECD	Organization for Economic Cooperation & Developmen
Environmental Management	PRA	Probabilistic Risk Analysis
Environmental Protection Agency		Pressurized Water Reactor
Electric Power Research Institute		Research & Development
Environmental Remediation	_	Reims Champagne Congrès (RCC) Centre
Formerly Utilized Sites Remedial Action Program		Resource Conservation and Recovery Act
High Efficiency Particulate Air		Remote Handled- Transuranic Waste
Highly Enriched Uranium		Republic of China
High Level Waste		Reactor Pressure Vessel
International Atomic Energy Agency		Rad Waste
International Decommissioning Network	SFEN	Société Française d'Energie Nucléaire
Intermediate Level Waste		Spent Nuclear Fuel
Institut de Protection et de SureteNucleaire		Solid Radioactive Waste
Integrated Safety Management		Technologically Enhanced Naturally Occurring
Japan Atomic Energy Research Institute		Radioactive Material
Korea Atomic Energy Research Institute	TRU	Transuranic
Low Enriched Uranium	TRUPACT	Transuranic Package Transporter
Low- intermediate Level Waste	USACE	United States Army Corps of Engineers
Low Level Waste	USDOD	US Department of Defense
Low Specific Activity	USDOE	US Department of Energy
Management & Integration	USNRC	US Nuclear Regulatory Commission
• •	WAC	Waste Acceptance Criteria
Mixed Uranium-Plutonium Oxide	WIPP	Waste Isolation Pilot Plant
Mixed Waste	WM	Waste Management
Non-Detectable Activity	WNA	World Nuclear Association
	As Low As Reasonably Achievable American Society of Mechanical Engineers Boiling Water Reactor Commissariat a l'Energie Atomique Comprehensive Environmental Response, Compensation and Liability Act Contact Handled- Transuranic Waste Dry Activated Waste Defense Nuclear Facilities Safety Board Department of Energy Environmental Impact Statement Environmental Management Environmental Protection Agency Electric Power Research Institute Environmental Remediation Formerly Utilized Sites Remedial Action Program High Efficiency Particulate Air Highly Enriched Uranium High Level Waste International Atomic Energy Agency International Decommissioning Network Intermediate Level Waste Institut de Protection et de SureteNucleaire Integrated Safety Management Japan Atomic Energy Research Institute Korea Atomic Energy Research Institute Low Enriched Uranium Low- intermediate Level Waste Low Level Waste Low Specific Activity Management & Integration Mixed Uranium-Plutonium Oxide Mixed Waste	As Low As Reasonably Achievable American Society of Mechanical Engineers Boiling Water Reactor Commissariat a l'Energie Atomique NEPA Comprehensive Environmental Response, Compensation and Liability Act NNSA Contact Handled- Transuranic Waste Dry Activated Waste Defense Nuclear Facilities Safety Board NPP Department of Energy Environmental Impact Statement Dervironmental Management Environmental Management PRA Environmental Protection Agency Electric Power Research Institute Environmental Remediation Formerly Utilized Sites Remedial Action Program High Efficiency Particulate Air High Level Waste International Atomic Energy Agency International Decommissioning Network International Decommissioning Network International Decommissioning Network International Cafe of She She Institut de Protection et de SureteNucleaire RW Integrated Safety Management Low Enriched Uranium TRUPACT Low- intermediate Level Waste Low Environmental Responce Usance Us

Notes			
	 		
	 		

Reims City Site Map

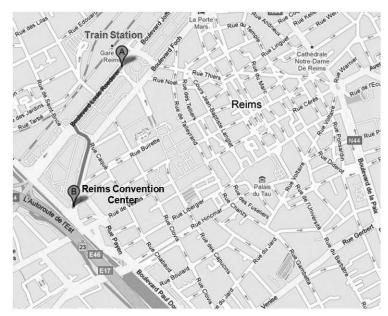




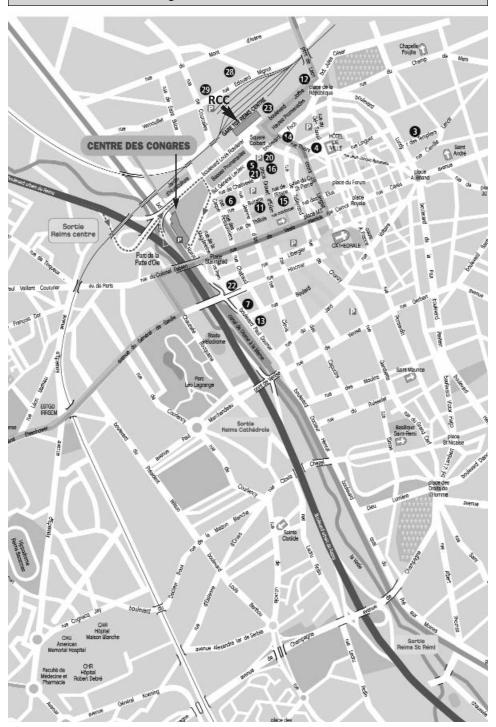
CHAMPAGNE HOUSES Maison de Pommery 7 Mumm 2 Taittinger 6

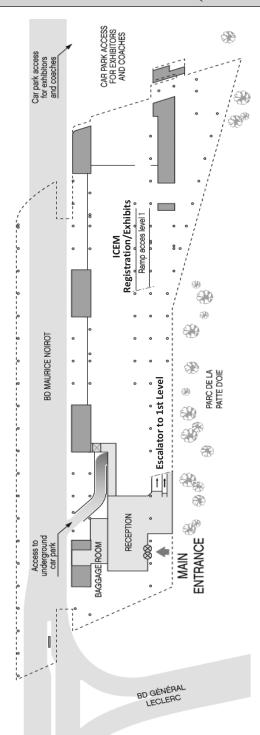
Veuve Clicquot Ponsardin 9
Basilique St-Rémi 8
Cathédrale Notre-Dame
de Reims 4
Musée des Beaux-Arts 5
Palais du Tau 3
Salle de Reddition 1

Reims Train Station to Reims Champagne Congrès (RCC) Centre (15 minute walk)



Reims Road Map and Hotel Locations





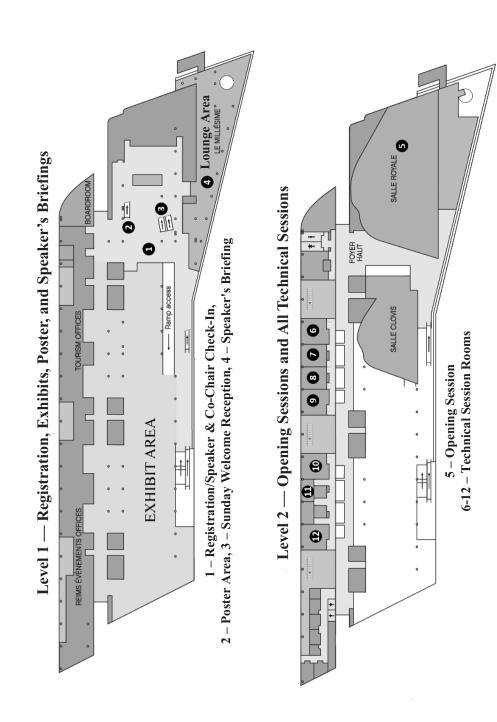
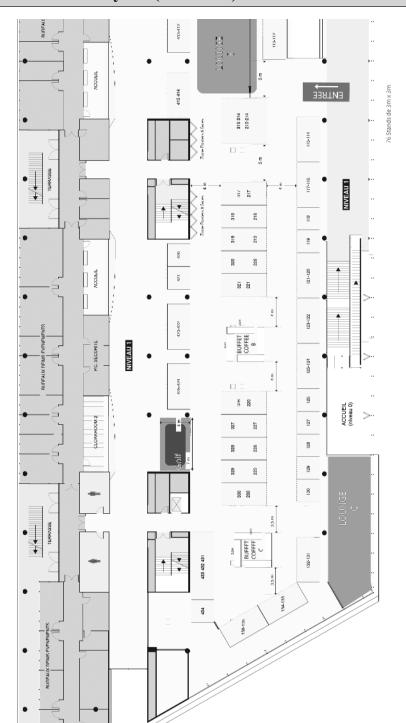
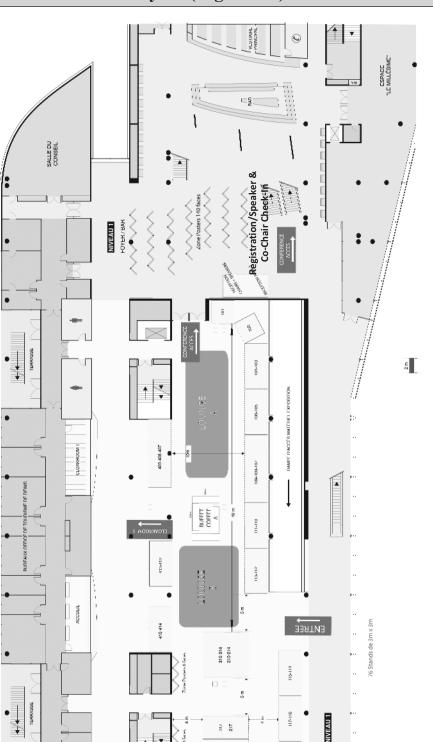


Exhibit Hall Layout (Left Side) — Level 1

Exhibit Hall Layout (Right Side) — Level 1





# NO	OFOOLON TITLEO	>	>	۵	~	_
SESSION	SESSION TITLES	LLW	HLW	D&	띪	甸
	MONDAY AM - SEPTEMBER 26, 2011					
1	Opening Session	•	•	•	•	•
	MONDAY PM - SEPTEMBER 26, 2011					
2	PANEL: Approaches for International Collaboration					•
3	PANEL: Lessons Learned: Chernobyl 25 Years Later, TMI & Other Experiences					
4	National and International Programs for L/ILW Management	•				
5	L/ILW Treatment Technology Development and Implementation	•				
6	Issues and Solutions Related to Spent Fuel, TRU, and HLW Transportation and Disposal		•			
7	National and International ER Programs				•	
8	Experiences in ER Clean-Up Methods and Actions				•	
9	POSTER SESSION: Low/Intermediate Level Waste Management Posters	•				
	TUESDAY AM - SEPTEMBER 27, 2011					
10	PANEL: Emerging Issues in the Management of I/ILW	•				
11	PANEL: How can Networks Improve the Implementation of ER Projects? The IAEA Network on EM/ER-ENVIRONET					
12	Waste Minimization, Avoidance, and Recycling	•				
13	HLW, Fissile, TRU and Spent Fuel Short and Long-Term Storage Issues		•			
14	D&D of Power Reactors and Research Reactors			•		
15	The French D&D Activities - Organization, Strategy, Objectives and Experience			•		
16	National and International D&D Programs			•		
17	Applying Strategic Planning, Decision-Making and Risk Reduction Methodologies in EM					•
18	Economic Analyses, Monitoring Strategies and Project Management in EM					•
19	POSTER SESSION: Spent Fuel, Fissile, Transuranic and HLW Management Posters		•			
	TUESDAY PM - SEPTEMBER 27, 2011					
20	Challenges When Selecting Disposal Options in the Light of the New IAEA Classification Scheme	•				
21	PANEL: Interim Storage, Geological Disposal, Partitioning & Transmutation		•			
22	PANEL: Contribution and Complementarities of Interim Storage, Geological Disposal, Partitioning & Transmutation					
23	Advanced L/ILW Conditioning Technologies - Part 1 of 2	•				
24	L/ILW Waste Characterization, Assay, and Tracking Systems - Part 1 of 2	•				
25	D&D of Non-Reactor Nuclear Facilities			•		
26	D&D Technologies - Part 1 of 2			•		
27	ER Site Characterization and Monitoring - Part 1 of 2				•	
28	Public Perception Issues and Stakeholder Engagement Strategies in Radioactive EM					•
	WEDNESDAY AM - SEPTEMBER 28, 2011					
29	PANEL: Decommissioning work at the OECD/Nuclear Energy Agency			•		
30	Siting, Design, Construction, and Operation of L/ILW Disposal Facilities - Part 1 of 2	•				
31	L/ILW Waste Characterization, Assay, and Tracking Systems - Part 2 of 2	•				

		_	ПСЕ			
SESSION#	SESSION TITLES	L/ILW	HLW	D&D	ER	EM
	WEDNESDAY AM - SEPTEMBER 28, 2011					
32	Repository Programs: - Part 1 of 2		•			
33	Recent Advances in Processing and Immobilization of HLW, Fissile Material and Transuanic (TRU) - Part 1 of 2					
34	Radium Remediation - Historical Perspectives and Current Circumstances - Part 2 of 2				•	
35	Uranium Mining and Milling Sites ER				•	
36	ER Site Characterization and Monitoring - Part 1 of 3				•	
37	Young Generation Network (YGN) and Professional Development Programs					•
38	PANEL: Young Generation Network (YGN) and Professional Development Programs					•
39A	POSTER SESSION: D&D					
39B	POSTER SESSION: ER					
39C	POSTER SESSION: EM & Crosscutting					
	WEDNESDAY PM - SEPTEMBER 28, 2011					
40	D&D Management Approaches and Planning Tools			•		
41	D&D Technologies - Part 2 of 2			•		
42	Liquid Waste Treatment Process and Experience	•				
43	Siting, Design, Construction, and Operation of L/ILW Disposal Facilities - Part 2 of 2					
44	Disposal Site and Waste Form Characterization and Performance Assessment - Part 1 of 2					
45	Repository Programs: - Part 2 of 2		•			
46	National and International Programs for Spent Fuel, Fissile, TRU, and HLW Management		•			
47	Radium Remediation - Historical Perspectives and Current Circumstances - Part 2 of 3				•	
48	PANEL: Radium Remediation Historical Perspectives and Current Circumstances - Part 3 of 3				•	
49	PANEL: Communications and Knowledge Management - Part 1 of 2					•
	THURSDAY AM - SEPTEMBER 29, 2011					
50	PANEL: Communications and Knowledge Management - Part 2 of 2					•
51	Safety Considerations Associated with L/ILW Management	•				
52	Disposal Site and Waste Form Characterization and Performance Assessment - Part 2 of 2	•				
53	Global Partnership in Environmental Management - Part 1 of 2					٠
54	PANEL: Global Partnership in Environmental Management - Part 2 of 2					•
55	Safety and Security Related to Environmental and Nuclear Materials Management					•
56	Advanced L/ILW Technologies - Part 2 of 2	•				
57	Recent Advances in Processing and Immobilization of HLW, Fissile and TRU - Part 2 of 2		•			
58	D&D Radiological Characterization and Monitoring					
59	Risk/Performance Assessments and Contaminant Migration					
60	POSTER SESSION: Best Posters of ICEM2011	<u> </u>				$\lfloor \cdot floor$

Approximate Presentation Times

Note: All Technical Program information listed below is as supplied to the ICEM website. All presentations listed are subject to change, for the Final Program.

Morning Presentation	Start Time	Afternoon Presentation	Start Time			
Session Start	8:30am	Session Start	1:45pm			
Paper 1	8:35am	Paper 1	1:50pm			
Paper 2	9:00am	Paper 2	2:15pm			
Paper 3	9:25am	Paper 3	2:40pm			
Paper 4	9:50am	Paper 4	3:05pm			
Break	10:15am - 10:40am	Break	3:30pm - 4:10pm			
Session Starts	10:4 5am	Session Starts	4:15pm			
Paper 5	10:50am	Paper 5	4:20pm			
Paper 6	11:15am	Paper 6	445pm			
Paper 7	11:40am	Paper 7	5:10pm			
Paper 8	12:05am	Paper 8	5:35pm			
Session Ends	12:30am	Session Ends	6:00pm			

Lunch 12:30pm - 1:40pm

Oral/Panel Session(s)

The above approximate presentation times are provided so you can tentatively arrange your schedule. We rely on the Session Co-Chairs to manage the presentations to this schedule so that you can move between sessions and attend the presentations you desire. We recognize however that due to cancellations or other unplanned events, the order or time may be changed for the Final Program. The session posters outside each speaking room are intended to show the cancelled papers and any changed times. We also encourage the Session Co-Chairs to manage the session time in the best interest for the majority of the attendees and request that they mark any changes on the posters before the session starts. We offer our regrets if you missed a presentation due to these changes.

Poster Presentations

Poster Presentations will be located on Level 1 of the Conference Center. Each day of the conference a Q&A time is set up to meet with the Poster Presenters. At the end of each session there will be 3 Poster Presentations selected as "Best of Show". These winning selections will remain until the end of the conference. We ask that you check back each day for these selections and on Thursday to view all of the awardees.

Day	Session #	Poster Setup	Poster Period	Q&A Period	Q&A Period	Poster Removal
Monday	9	8:00am - 8:30am	8:30am - 5:45pm	10:15am - 10:40am	5:15pm - 5:45pm	5:45pm - 6:00pm
Tuesday	19	8:00am - 8:30am	8:30am - 5:45pm	10:15am - 10:40am	5:15pm - 5:45pm	5:45pm - 6:00pm
Wednesday	39 A/B/C	8:00am - 8:30am	8:30am - 5:45pm	10:15am - 10:40am	5:15pm - 5:45pm	5:45pm - 6:00pm
Thursday	60	Best of Show	8:30am - 12:00pm	X	X	12:00pm -12:30pm

Presentations with a paper prepared for the post conference CD are noted as "wP". Presentations without papers are noted as "w/oP". Authors and Panelists speaking are shown in **Bold.**

SESSION 1

Monday: 9:00am - 12:30pm

OPENING SESSION

Co-Chairs: Anibal Taboas, ASME (USA)

Dominique Greneche, SFEN (France)

Organizer(s): Anibal Taboas, Dominique Greneche and Gary Benda

Welcome to the ICEM'11 Conference —

Welcome to Reims and France —

Plenary Speakers include:

- Mr. François-Michel Gonnot, Chairman of the Board, Andra (France)
- Dr. Ines Triay, Assistant Secretary, US DOE EM Program (USA)
- Mr. Christophe Béhar, Nuclear Energy Director, CEA (France)
- Ms. Neile Miller, Principal Deputy Administrator, US DOE NNSA Program (USA)
- Dr. Tero Varjoranta, Director, Division of Nuclear Fuel Cycle and Waste Technology, IAEA (Austria)

SESSION 2

Monday: 1:45pm - 6:00pm

PANEL: APPROACHES FOR INTERNATIONAL COLLABORATION (5.18)

Co-Chairs: Ana Han, DOE (USA)
John Mathieson, NDA (UK)
Organizer(s): Ana Han and John Mathieson

This panel will provide an overview of the different approaches and initiatives used to promote international collaboration in environmental remediation and radioactive waste management, with a focus on the challenges and opportunities unique to each country and organization. An important element to reducing the cost and schedule of a country's and/or organization's environmental remediation mission is forming key international collaborative partnerships that focus on identifying and leveraging international expertise, infrastructure, and collaboration opportunities. Panelists include: Marc Butez, Andra (France); John Mathieson, NDA (UK); Horst Monken-Fernandes, IAEA (Austria); with invited panelists from ANSTO (Australia), AECL (Canada), DOE (USA) and Korea.

SESSION 3

Monday: 1:45pm - 6:00pm

PANEL: LESSONS LEARNED: CHERNOBYL TWENTY-FIVE YEARS LATER - TMI & OTHER EXPERIENCES (3.11)

Co-Chairs: Jas Devgun, Sargent & Lundy (USA)

Jean-Guy Nokhamzon, CEA/DEN/DADN (France)

Organizer(s): Jas Devgun and Jean-Guy Nokhamzon

At a time of Chernobyl accident's 25th anniversary, this panel will discuss the status, challenges, and lessons learned from confinement activities and decommissioning activities as well as lessons learned from Chernobyl and other nuclear industry recovery experiences such as Three Mile Island. Panelists: **Zoran Drace**, IAEA; **Sergii Mitichkin**, Chernobyl NPP; **Thomas Chauveau**, Bouygues-Construction; **NEA** Representative; **Industry** Representative; and a **Regulatory** Representative.

SESSION 4

Monday: 1:45pm - 6:00pm

NATIONAL AND INTERNATIONAL PROGRAMS FOR L/ILW MANAGEMENT (1.2)

Co-Chairs: David Wallace, CDM (USA)

Michel Dutzer, Andra (France)

Organizer(s): David Wallace and Keith Anderson Reviewer(s): David Wallace and Michel Dutzer

- 1. Low Level Waste Disposal Regulatory Issues in the US (wP 59311) David James, DW James Consulting LLC, (USA); Lisa Edwards, Electric Power Research Inst. (USA)
- 2. Issues for the Management of Very Low Level Waste in the UK (wP 59329) Adrian Punt, AMEC, (UK)
- 3. Taking the UK's National LLW Programme from Strategy Development to Implementation (wP-59059) David Rossiter, Rachel O'Donnell, LLW Repository Ltd (UK)
- 4. CEA's Waste Management Policy and Strategy Lessons Learned (w/oP 59201) Didier Dall'ava, CEA, (France)

–Break–

- 5. Regulations for the Disposal of Radioactive Waste in the Konrad Repository (wP -59105)
 - Hagen Gunther Jung, Lower Saxony Water Management, Coastal Protection and Nature Conservation Agency (NLWKN); Gabriele Bandt, TÜV Nord EnSvs Hannover GmbH & Co. KG (Germany)
- 6. Radioactive Waste Management Challenges and Progress in Iraq (wP 59164) Fouad Al-Musawi, Emad Shamsaldin, Ministry of Science & Technology (Iraq): John Cochran, Sandia National Laboratories (USA)
- 7. Development of Models to Predict NPP Radioactive Waste Arising and Verification against the AP1000 UK Generic Design Assessment Safety Submission (wP - 59328) Carmen Niculae, Liz Grindon, AMEC (UK)
- 8. The Hydrogeologic Environment for a Proposed Deep Geologic Repository in Canada for Low and Intermediate Level Radioactive Waste (wP - 59285) Jonathan Sykes, Stefano Normani, Yong Yin, University of Waterloo; Mark Jensen, Nuclear Waste Management Organization (Canada)

SESSION 5

Monday: 1:45pm - 6:00pm

L/ILW TREATMENT TECHNOLOGY DEVELOPMENT AND IMPLEMENTATION (1.15)

Co-Chair(s): Hans Codee, Corva (Netherlands)

Keith Anderson, ECC (USA)

Organizer(s)/Reviewers(s): Hans Codee and Keith Anderson

- 1. Preliminary Demonstration of GeoMelt Treatment of Hanford's K-Basin Sludge (wP - 59004)
 - Keith Witwer, IMPACT Services, Inc.(USA)
- 2. Graphite Wastes Treatment (wP 59017) Gerard Laurent, EDF/CIDEN (France)
- 3. Waste Loading Enhancements for Hanford LAW Glasses (wP 59018)
- Albert Kruger, US DOE (USA) 4. THOR^R Steam Reforming Technology for the Treatment of Complex and Problematic Wastes (wP - 59084)
 - J. Brad Mason; Adam L. Foster, Studsvik, Inc. (USA)

-Break-

- 5. A Room Temperature Stabilization and Waste Volume Reduction Method Tested on Belgian Intermediate-Level Homogeneous Bituminized Waste (Eurobitum) (wP -
 - Nathalie R.E.N. Impens, SCK-CEN; Jan Deckers, BelgoProcess; Lesley Adriaensen, Pierre Van Iseghem, Studiecentrum voor Kernenergie -Centre d'Etude de l'Energie Nucléaire (Belgium)
- 6. Standardizing of LLW/ILW Treatment for Russian Type Pressure Water Reactors (wP - 59233)
 - Klaus Buettner, Rainer Slametschka, NUKEM Technologies GmbH (Germany)
- 7. Thirty Five Years of Incineration in Studsvik, Lessons Learned and Recent Modifications and Improvements (wP - 59264) Maria Lindberg, Lena Bergström, Joakim Lövstrand, Studsvik Nuclear AB (Sweden)
- 8. Sodium-Rich Wastes: Challenges, Analysis and Performance (w/oP 59316) Daniel Brew. Melody L Carter. Lou Vance, Martin W Stewart, ANSTO (Australia)

SESSION 6

Monday: 1:45pm - 6:00pm

ISSUES AND SOLUTIONS RELATED TO SPENT FUEL, TRU, AND HLW TRANSPORTATION AND DISPOSAL (2.5)

Co-Chair(s): Jeffrey Griffin, SRNL (USA)

Dominique Greneche, SFEN (France)

Organizer(s)/Reviewers(s): Jeffery Griffin and Natraj Iyer

- 1. Initial Assessment of Radon in a Deep Geological Repository for Used Nuclear Fuel (wP - 59145)
 - Kelly Sedor, Frank Garisto, Helen Leung, Nuclear Waste Management Organization (Canada)
- 2. Groundwater Flow Modeling of Periods with Temperate Climate Conditions for Use in a Safety Assessment of a Repository for Spent Nuclear Fuel (w/oP - 59154) Steven Joyce, Lee Hartley, Trevor Simpson, Serco (UK)
- 3. An Iteractive Approach to Achieving Safety: From 2005 to 2014 (wP 59294) Fabrice Boissier, Sylvie Voinis, Lise Griffault, David Claudel, Andra (France)
- 4. Methodological Guide on Development of Work Plan for Mitigation of Accident Consequences during Transportation of Radioisotope Thermoelectric Generators and Radioisotope Heat Sources (wP - 59162)

Valeriy Shempeley; Scientific and Engineering Centre for Nuclear and Radiation Safety; Vladimir Reka, Rostechnadzor; Malgorzata Sneve, Norwegian Radiation Protection Authority; Alexander Smetnik, FSUE VO Safety; Galina Zubareva, Tver State Medical Academy (Russia/Norway)

-Break-

- 5. Conception of a New Conditioning Process of Strongly Plutonium Contaminated Waste Canisters (wP - 59205)
- Sylvain Chevassu, ONET Technologies ONECTRA (France)
- 6. Alpha Gamma Hot Cell Facility De-Inventory at Argonne National Laboratory: A Tale of Two Projects (wP - 59238)
- Michael Sodaro, Daniel Pancake, Argonne National Laboratory (USA) 7. Physical and Chemical Processes During Vacuum Drving of Metallic Spent Nuclear
 - Fuel (wP 59114) Martin Plys, Michael Epstein, Sung Jin Lee, Robert Apthorpe, Fauske & Associates LLC (USA)
- 8. Removal of Hydrogen from Closed Irradiated Fuel Storage Containers (wP 59351) Gerard Peplinskie, Jonathan Fitzpatrick, Cody Ziebarth, Christina Waters, Atomic Energy of Canada Ltd, (Canada)

Technical Sessions — Page 33

SESSION 7

Monday: 1:45pm - 6:00pm

NATIONAL AND INTERNATIONAL ER PROGRAMS (4.2)

Co-Chairs: Leo Van Velzen, NRG (Netherlands)

Steve Brown, SENES Consultants Ltd (USA)

Organizer(s): Steve Brown and Didier Dubot Reviewer(s): Steven Brown and Leo Van Velzen

1. Remediation of Areva Miramas Site (w/oP - 59312)

Gilles Potier, Areva (France)

2. Application of an Environmental Remediation Methodology: Theory vs. Practice. Reflections and Two Belgian Case Studies (wP - 59184)

Koen Mannaerts, Federal Agency For Nuclear Control (FANC); Stephane Pepin, FANC

Belgium,

3. Advanced Simulation Capability for Environmental Management (ASCEM) (wP – 59065)

59065

Paul Dixon, Los Alamos National Laboratory; Juan Meza, Lawrence Berkeley National Laboratory; Mark Williamson, US DOE, Office of Environmental Management; David Moulton, Los Alamos National Laboratory; Ian Gorton, Mark Freshley, Pacific Northwest National Lab; Yvette Collazo Reyes, USA DOE; Kurt Gerdes, DOE EM (USA)

4. Objectives for Remediation of Areas Polluted by Radioactive Substances in France (w/oP - 59300)

Charlotte Cazala, IRSN; Odile Palut Laurent, ASN; Chapalain Estelle, MEDDTL; Didier Gay, IRSN; Geraldine Dandrieux, ASN; Alain Thomassin, Olivier Chabanis, Jerome Guillevic, IRSN; Laurence Roy, MEDDTL (France)

-Break-

5. Integrated Program Management for Major Nuclear Decommissioning and Environmental Remediation Projects (wP – 59068)

John Lehew, CH2M HILL Plateau Remediation Company (USA)

6. Deep Vadose Zone Applied Research Center - Transformational Technology Development for Environmental Remediation (wP - 59020)

Dawn Wellman, Mark Triplett, Mark Freshley, Michael Truex, Roy Gephart, Tim Johnson, Pacific Northwest National Lab; Kurt Gerdes, Grover Chamberlain, Justin Marble, Rosa Ramirez, DOE EM; Briant Charboneau, DOE RL; John Morse, US DOE (USA)

7. EPRI Nuclear Power Plant Groundwater Protection Program (w/oP - 59341)

Karen Kim, Electric Power Research Institute (USA)

8. Clean Up Strategies and Results in USIN Site in São Paulo City, Brazil (wP - 59243) Rodrigo Raposo de Almeida, Federal Fluminense University; Valter J.G. Mortágua, Industrias Nucleares do Brasil (Brazil)

SESSION 8

Monday: 1:45pm - 6:00pm

EXPERIENCES IN ER CLEAN-UP METHODS AND ACTIONS (4.4)

Co-Chairs: Susan Walter, AECOM (USA)

Sandrine Magdaliniuk, Areva (France)

Organizer(s): Didier Dubot and Steve Brown

Reviewer(s): Susan Walter and Sandrine Magdaliniuk

1. Design and Installation of a Permeable Treatment Wall to Passively Remove Strontium-90 From Groundwater at a Former Commercial Nuclear Fuel Reprocessing Facility in New York (wP - 59292)

Douglas Bablitch, Scott Warner, Richard Frappa, AMEC Geomatrix, Inc. (USA)

2. Groundwater Remediation of Hexavalent Chromium Along Hanford's River Corridor (wP - 59030)

Dyan Foss, CH2M HILL Plateau Remediation Company; Briant Charboneau, DOE RL (USA)

3. Environmental Remediation of an Industrial Site of Alstom Grid (France) (wP - 59270)

Stéphanie Romero, ALSTOM GRID (France)

4. Radiological Assessment of an Area Contaminated with Uranium Residues (wP – 59192)

Danyl Perez Sanchez, CIEMAT (Spain)

–Break–

- 5. Decommissioning of the Active Storage Facility for Residuals in Rheinsberg (Brandenburg/Germany) and Results of Groundwater Monitoring (wP 59134) Mathias Steinhoff. Öko-Institut e.V. (Germany)
- Radium Removal by Dissolution Processes using Citric Acid Solutions (wP 59051)
 Abdullah S. AL-Hobaib, King Abdulaziz City for Science and Technology (KACST);
 Nasser Alkhomashi, KACST (Saudi Arabia)
- 7. Scarcity of Natural Resources (w/oP 59012)

 Emmanuel Edward, White Sands Hotel (Tanzania)
- 8. 25 Years After Chernobyl NPP Accident: Experience and Trends of Radioactive Contaminated Soils Rehabilitation in Belarus (wP 59242)

 Leanid Maskalchuk, JIPNR-Sosny NAS of Belaru (Belarus)

SESSION 9

Monday: 8:30pm - 5:45pm

POSTER SESSION: LOW/INTERMEDIATE LEVEL WASTE MANAGEMENT (L/LLW) (1.1)

Co-Chairs: Donald Goebel, SEC (USA)

Vickie Maranville, AMEC (USA)
David Wallace, CDM (USA)

Reviewer(s): Donald Goebel, Vickie Maranville and David Wallace

1. Radioactive Waste Management in Kyrgyz Republic (wP - 59241)

Baigabyl Tolongutov, Ecological Safety Center (Kyrgyzstan)

2. Status of Site Investigation for L/ILW Facilities in the Philippines (wP - 59262)

Maria V. Palattao, Carl Nohay, Rolando Reyes, Alfonso Singayan, Philippine Nuclear
Research Institute; Dirk Mallants, Belgian Nuclear Research Centre SCK-CEN
(Philippines/Belgium)

3. Management of Low/Intermediate Radioactive Wastes in Albania (wP - 59002)

Luan Qafmolla, Center of Applied Nuclear Physics (Albania)

4. Safety Evaluation of Central Radioactive Waste Processing and Interim Storage Facilities in Bangladesh (wP - 59010)

Abdus S Mollah, Bangladesh Atomic Energy Commission (Bangladesh)

5. Numerical Modeling for Colloid-Facilitated Migration of N-number Radionuclides Chains in the Fractured Rock (w/oP - 59257)

Chun-Ping Jen, National Chung Cheng University (Taiwan)

6. Laboratory Experiments on the Alteration of Highly-Compacted Bentonite by Alkaline Solution and the Effects on Physical Properties (wP - 59318)

Satoru Miyoshi, Shinya Morikami, Yukinobu Kimura, Tomoko Jinno, Shuichi Yamamoto, Obayashi Corporation (Japan)

 Gas Transport Properties of Pumice Tuff for Performance Assessment of LLW Disposal Facility (wP - 59074)

Shuichi Yamamoto, Kenichiro Suzuki, Obayashi Corporation; Mamoru Kumagai, Japan Nuclear Fuel Limited; Yasuhiro Tawara, Koji Mori, Geosphere Environmental Technology Corporation (Japan)

8. Numerical Simulation on Effects of Test Conditions on Measured Swelling Pressure of Compacted Bentonite by Swelling Model (wP - 59219)

Yukihisa Tanaka, Central Research Institute of Electric Power Industry (Japan)

Conference Registration Procedures and Forms

US and other Non-European Union Advance Registration Application and Procedures - Form #1

- All US and Non-European Union registrants must fill out the Registration Application Form #1 and mail or fax it to the address noted on the registration form. Attendees can also register on-line at: www.asmeconferences.org/icem2011 OR www.sfen.fr/icem-11. PLEASE NOTE: Registration Application will not be processed without payment.
- 2. To qualify for discounted Member Registration fees, you must be an ICEM'11 Author, Co-Chair, Panelist, Poster Presenter or a member of ASME or SFEN.
- 3. The registration fee includes the Sunday Welcome Reception and the Tuesday Reception, the Final Program and one copy of the published CD proceedings. Optional activities that are not included in the registration fee are: the Technical Training Course, the Wednesday Banquet, Golf, Technical Tours, and/or the Guest Programs (Tours).
- 4. All tours (Technical & Guest) have been based on a minimum number of attendees. If that number is not reached, interested delegates will be contacted by August 31st of cancellation and their refund. Delegates for technical tours would be given the option of registering for a different tour. The conference organizers accept no responsibility for costs associated with the cancellation of a tour e.g. flight change. To assist space for the attendees who strongly desire to attend, we are implementing a tour cancellation fee of €100 (\$137 USD). This will be handled as a deposit and a refund once you attend the tour.. Guest Tours: refunds will be held on a case by case basis.
- 5. Payment MUST be sent in USD \$ by May 31 or September 16 to receive the early bird discount. All registration fees and submissions received after this date, will be subject to the increased registration rates. NOTE: Registration fees will increase on June 1, 2011 and on-site payment includes VAT and paid in EUROS, which includes check processing.
- 6. All payments must be in USD\$ (for Non-European Union registrants). ALL Foreign exchange fees must be included. We do not accept bank transfers. You may pay by check, Visa, MasterCard or American Express. If paying by check, make checks payable to ASME. Whichever method of payment you choose, your payment must accompany your registration application in order to be processed and considered a registrant.
- 7. Pre-registrations can only be received up to September 16, 2011 to allow for processing time. After this date, registrations will be processed on-site which will incur a higher registration rate and a 19.6% VAT charge.
- 8. Registration confirmations will be sent upon processing by email. Please be sure to bring your printed confirmation to the conference as this will be your only confirmation of registration and payment.
- 9. Onsite registration processing. All onsite registration fees and optional event purchases must be paid in EUROs (€) currency and VAT @19.6% is applied
- 10. THE ICEM'11 CANCELLATION POLICY: Cancellation s received by or on May 31, 2011 Full Refund. Cancellation received after May 31, 2011 to September 19, only \$500 USD or 50% is refundable. Cancellations received after September 16, 2011, no refund is available. Substitutions will be allowed. Cancellations must be in writing. Cancellation fees will be waived for justified cancellations approved by the ICEM Finance Committee.

PLEASE PRINT: Dr. Mr. Ms. Other:	er:					
First Name:		Middle Initial:		Last Name:		
Company/Organisation Name:				J	Job Title:	
Address:						
City:		State	State/Country:	Z	Zip/Postal Code:	
Phone:F	Fax:		Em	Email:		
Top Eight Sessions you are interested in attending:	ing:					
The Technical Registration fee includes the Sunday Welcome Reception and the Tuesday Reception, and one copy of the published proceedings. Optional activities not included are the Wednesday Banquet, Technical Tours, Training Course, Golf and the Guest Programs. Please see details of our cancellation policy.	lcome Reception	and the Tuesday R	eception, and on	e copy of the publ	ished proceedings. Optional activition policy.	es not included are
*Member Rate: All authors listed will receive the Member Rate. Authors will not be permitted to present more than two oral presentations. To qualify for discounted Member Registration fees, you must be an ICEM'11 author, chair, co-chair, or a member of ASME or SFEN. **Exhibitor Registration: Single / Double Stand: 1 (one) Complementary Technical Registration; Triple / Quad 2 (two) Complementary Technical Registration. Sponsorships - Platinum 3 (three) Technical Registrations and 3 (three) Wednesday banquet tickets; Gold 2 (two) Technical Registrations and 2 (two) Wednesday banquet tickets, Silver 1 (one) Complementary Technical Registration and 1 (one) Wednesday banquet ticket.	er Rate. Authors v r, co-chair, or a m nnical Registratior anquet tickets, Si	vill not be permitted ember of ASME or : n. Sponsorships - PI lver 1 (one) Comple	to present more SFEN. **Exhibito latinum 3 (three) mentary Technic	than two oral pres r Registration: Sir Technical Registra al Registration an	sentations. To qualify for discounted I igle / Double Stand: 1 (one) Compler ations and 3 (three) Wednesday band d 1 (one) Wednesday banquet ticket	Member smentary Technical riguet tickets; Gold 2 st.
CONFERENC	CE REGISTI	RATION AND	OTHER PR	OGRAMS A	CONFERENCE REGISTRATION AND OTHER PROGRAMS AT A GLANCE	
Registration Categories	Payment o	Payment on or Before May 31, 2011	After May 31, 2011 and Before September 16	1, 2011 and tember 16	After September 16 Onsite & Plus VAT	Subtotal
Technical Registration	USD - \$	Select One	USD - \$	Select One	Onsite Payment	
Session (Co-Chairs) # Abstract/Pap	Abstract/Paper(Author)#	Me	Member ID: ASME or SFEN #	or SFEN#		
* Member/Author/Chair/Co-Chair Rates	\$1,190		\$1,375		€ 1,125	
* One Day - Mon - Tues Wed/Thurs.	\$585		\$675		€ 542	
Non-Member	\$1,385		\$1,600		€ 1,304	
One Day - Mon - Tues Wed/Thurs.	\$645		\$710		€ 600	
Exhibitor/Sponsorship Complimentary	N/C		N/C		N/C	
IAFA Grantees	\$600		\$700		€ 542	

ICEM'2011 - ADVANCE REGISTRATION FORM Mail, Fax or register online with payment received

EGISTRATION FORM — US and Non-European Union Registration Application - nline with payment received before May 31 or September 16, 2011 to receive the discounted rates ICEM 2011 Conference Registration: Attn: Shari Brabham Tucson, AZ 85732-7296 - V: (520) 571-6047 F: (520) 445-8011 Email: cisscorp@gmail.com

P.O. Box 57296 -

ICEM'2011 - ADVANCE REGISTRATION FORM — European Union Registration Application - Form #2 Mail, Fax or register online with payment received before May 31 or September 16, 2011 to receive the discounted rates. ICEM'11 Conference Registration c/o French Nuclear Energy Society (SFEN) • 5 rue des Morillons • F75015 Paris Phone: +33 (0)1 53 58 32 16 • Fax: +33 (0) 1 53 58 32 11 • Email: icem11.france@sfen.fr or REGISTER ON LINE @ www.asmeconferences.org/icem2011 or www.sfen.fr/icem-11

OI AEGISTEA OI	V LIVE & WW. asinecom	asiliccolliciclices.org/1cclli2011 of w	w w.sicii.ii/icciii-11	
PLEASE PRINT: □ Dr. □ Mr. □ Ms. □ Other:	T			
First Name:	Middle Initial:	:Last Name:		
Company/Organisation Name:		t	Job Title:	
Address:				
City:	Sta	State/Country:Z	Zip/Postal Code:	
Phone:F	Fax:	Email:		
Top Eight Sessions you are interested in attending:	ng:			
The Technical Registration fee includes the Sunday Welcome Reception and the Tuesday Reception, and one copy of the published proceedings. Optional activities not included are the Machaesday Rangulat Technical Tours Training Course Golf and the Guest Programs Please see details of our cancellation policy.	come Reception and the Tuesday	Reception, and one copy of the pub Plases see details of our cancellating	lished proceedings. Optional activities no	ot included are
The well results of the control of t	rse, Goil and the Guest Frograms. Rate. Authors will not be permitte ; co-chair, or a member of ASME o nical Registration. Sponsorships - I anquet tickets, Silver 1 (one) Comp	riease see details of our canceriation du present more than two oral pre- r SFEN. **Exhibitor Registration: Sin Platinum 3 (three) Technical Registration an ilementary Technical Registration and	on poucy. sentations. To qualify for discounted Mem ngle / Double Stand: 1 (one) Complement ations and 3 (three) Wednesday banquet nd 1 (one) Wednesday banquet ticket.	nber ttary Technical ttickets; Gold 2
CONFERENC	E REGISTRATION ANI	CONFERENCE REGISTRATION AND OTHER PROGRAMS AT A GLANCE	AT A GLANCE	
Registration Categories	Payment on or Before May 31, 2011	After May 31, 2011 and Before September 16	After September 16 Onsite & Plus 19.6% VAT	Subtotal
Technical Registration	EURO Select One	EURO Select One	Onsite Payment	
Session (Co-Chairs) # Abstract/Pap	Abstract/Paper(Author) #	Member ID: ASME or SFEN#		
* Member/Author/Chair/Co-Chair Rates	€ 870	€1,004	£ 1,125	
* One Day - Mon - Tues Wed/Thurs. Non-Member	£ 427	£ 493	€ 542 € 1 304	
One Day - Mon - Tues Wed/Thurs.	€ 470	€ 517	€ 600	
Exhibitor/Sponsorship Complimentary	N/C	N/C	N/C	
Optional Events				
Sunday Technical Training Course	E145	€ 160	€ 175	
Wednesday Banquet (09/28/11)		€ 47	€ 54	
Technical Tours (Only Available until Sept. 26)	Preferred Choice - 1st Choice:			
Technical Tour 1A: Reims to Andra, LLW Site	€ 120	e	N/A	
Technical Tour 1B: Reims to Andra, HLW Site	£120		N/A	
Technical Tour IC: Kelms to Chooz Refundable Denosit for Technical Tours	£ 120	£ 100	N/A A/N	
Guest Programs - Guest Name:			14/2X	
Reception - Sunday	€ 20	€ 26	€ 27	
Reception - Tuesday	€20	€ 26	€27	
Wednesday Banquet (09/28/11)	6 60	€ 68	€ 67	
Tour 1: Day Tour to Paris	€ 100	€118	€ 135	
Tour 2A: Walking Tour of Reims	620	£23	£ 25	
Tour 2. Vinit of the Champagne Cellar tour	635	639	£43	
Tour 4: The Old City of Troves	£ 20	£ 77	£ 85	
Tour 5: Walking Tour/Champagne Cellar tour	E 35	639	£ 43	
Golf Tournament: Please be sure to list either your handicap or Average score	E 120	e 132	N/A	
TOTAL FROM ABOVE: €	PLUS 19.6% VAT: €	= FINAL	= FINAL TOTAL: €	
Enclosed is Check (payable to: SFEN) #	In the amount of:	t of: €		
Mail your completed form with payment to: SFI	payment to: SFEN • c/o ICEM*11 • 5 rue des Morillons • F75015 Paris	Morillons • F75015 Paris		
Credit Card: □ VISA □ MasterCard □ Ameri	ican Express (If credit card bil	American Express (If credit card billing address is different than listed above, please list below)	sted above, please list below)	
Card Holder Name:			Amount to be charged: \$	
Credit Card Number:		Exp Date:	CCV Code:	
Mailing Address:			Mail Stop/Suite:	
City:	State:	Zip Code:	Country:	

City:	Mailing Address:	Credit Card Number:	Card Holder Name:	Credit Card	Make Check			Golf Tournament: Please b handicap or Average score	Tour 5: Walkir	Tour 4: The O	Tour 3: Visit o	Tour 2B: Walk	Tour 2A: Walk	Tour 1: Day Tour to Paris	Wednesday Ba	Reception - Tuesday	Reception - Sunday	Guest Prograi	Refundable De	Technical Tour	Technical Tour	Technical Tour	Technical Tour	Wednesday Ba	Sunday Technic	Spring my curs
	ess:	umber:	Name:	Credit Card: 🗆 VISA 🗅 MasterCard 🗀 American Express (If credit card billing address is different than listed above, please list below)	Make Checks Payable to: ASME (Mailing address is listed above).	PAYMENT POLICY All payments mus See al		Golf Tournament: Please be sure to list either your handicap or Average score	Tour 5: Walking Tour/Champagne Cellar tour	Tour 4: The Old City of Troyes	Tour 3: Visit of the Champagne Vineyard	Tour 2B: Walking Tour/Champagne Cellar tour	Tour 2A: Walking Tour of Reims	ur to Paris	Wednesday Banquet (09/28/11)	esday	ıday	Guest Programs - Guest Name:	Refundable Deposit for Technical Tours	Technical Tour 1C: Reims to Chooz	Technical Tour 1B: Reims to Andra, HLW Site	Technical Tour 1A: Reims to Andra, LLW Site	Technical Tours (Only Available until Sept. 26)	Wednesday Banquet (09/28/11)	Sunday Technical Training Course	8
S				can Express (If credit c	ress is listed above).	REGISTRATIONSt be made in US currenbove contact information		\$170	\$49	\$98	\$112	\$49	\$28	\$140	\$85	\$28	\$28		\$140	\$168	\$168	\$168	Preferred Choice - 1st Choice:	\$56	\$195	
State: Zip Code:		Exp Date:		ard billing address is diffe		PAYMENT POLICY - REGISTRATIONS WILL NOT BE PROCESSED WITHOUT PAYMENT All payments must be made in US currency with foreign exchange fees added for non-US Banks See above contact information for mailing or faxing in this application.		\$185	\$54	\$105	\$120	\$54	\$32	\$161	\$95	\$36	\$36		\$140	\$187	\$187	\$187	st Choice:	\$64	\$220	
ode:	M ₂	Date:	Amount to be	erent than listed above	Check#	ESSED WITHOUT I fees added for non-U: 1 this application.	Grand Tot																2nd Choice:			
Country:	Mail Stop/Suite:	CCV Code:	be charged: \$, please list below)		PAYMENT S Banks	Grand Total to be Charged:	N/A	€ 43	€85	€ 97	€ 43	€ 25	€ 135	€ 67	€ 27	€ 27		N/A	N/A	N/A	N/A		€ 54	€ 175	
							S																			

Conference Registration Procedures and Forms

European Union Advanced Registration Application and Procedures - Form #2

- 1. All European Union (EU) registrants must fill out the Registration Application Form #2 and mail or fax it to the address noted on the registration form. Attendees can also register on-line at: www.asmeconferences.org/icem2011 **OR** www.sfen.fr/icem-11. *PLEASE NOTE:* Registration Application will not be processed without payment.
- 2. To qualify for discounted Member Registration fees, you must be an ICEM'11 Author, Co-Chair, Panelist, Poster Presenter or a member of ASME or SFEN.
- 3. The registration fee includes the Sunday Welcome Reception and the Tuesday Reception, the Final Program and one copy of the published CD proceedings. Optional activities that are not included in the registration fee are: the Technical Training Course, the Wednesday Banquet, Golf, Technical Tours, and/or the Guest Programs (Tours).
- 4. All tours (Technical & Guest) have been based on a minimum number of attendees. If that number is not reached, interested delegates will be contacted by August 31st of cancellation and their refund. Delegates for technical tours would be given the option of registering for a different tour. The conference organizers accept no responsibility for costs associated with the cancellation of a tour e.g. flight change. To assist space for the attendees who strongly desire to attend, we are implementing a tour cancellation fee of €100 (\$137 USD). This will be handled as a deposit and a refund once you attend the tour. Guest Tours: refunds will be held on a case by case basis.
- 5. Payment MUST be sent in EURO (€) currency and received by May 31, 2011 or September 16 to receive the early bird discount. All registration fees and submissions received after this date, will be subject to the increased registration rates. NOTE: Registration fees will increase on June 1, 2011 and this includes check processing.
- All payments must be in EURO (€) currency and VAT @19.6% applied to final total
 of the registration fees for all European Union registrants.
- Pre-registrations can only be received up to September 16, 2011 to allow for processing time. After this date, registrations will be processed on-site, at the onsite registration rates.
- 8. Registration confirmations will be sent upon processing by email. Please be sure to bring your printed confirmation to the conference as this will be your only confirmation of registration and payment.
- 9. Onsite registration processing. All onsite registration fees and optional event purchases must be paid in EURO (€) currency and VAT @19.6% is applied
- 10. THE ICEM'11 CANCELLATION POLICY: Cancellation s received by or on May 31, 2011 Full Refund. Cancellation received after May 31, 2011 to September 19, only \$500 USD or 50% is refundable. Cancellations received after September 16, 2011, no refund is available. Substitutions will be allowed. Cancellations must be in writing. Cancellation fees will be waived for justified cancellations approved by the ICEM Finance Committee.

- 9. Extraction and Confinement of Caesium Using Functionalized Porous Materials (w/oP 59106)
 - Carole Delchet, Institut de Chimie Séparative de Marcoule; Yves Barre, CEA Marcoule; Guillaume Toquer, Institut de Chimie Séparative de Marcoule; Joulia Larionova, Yannick Guari, Institut Charles Gerhardt - UMR5253; Agnès Grandjean, Institut de Chimie Séparative de Marcoule (France)
- Photocatalytic and Photochemistry Degradation of Liquid Waste Containing EDTA (wP - 59144)
 - Célia Lepeytre, Cyril Lavaud, Guillaume Serve, CEA Marcoule (France)
- 11. Management of Smoke Detectors Containing Radioactive Sources (wP 59049)

 Mercedes Salgado Mojena, Juan Carlos Benitez Navarro, Juan Miguel Hernandez

 García, Rafael Castillo Gomez, Ania Berdellans Escobar, CPHR; Carlos Jose Pirez,

 Pedro Graciano Soto, Atomic Centre Ezeiza (Cuba/Argentina)
- 12. Simple Inventory Characterization Based on Measurements (w/oP 59056)

 Thomas Nellemann, Anne Sørensen, Danish Decommissioning (Denmark)
- 13. Optimization of Radioactive Waste Cementation for Decommissioning of Salaspils Research Reactor (wP 59066)

Gunta Abramenkova, University of Latvia; Andris Abramenkovs, Latvian Environment, Geology and Meteorology Centre; Maris Klavins, University of Latvia (Latvia)

- 14. Liquid Waste Treatment Process (w/oP 59061)
 - Bouchta Moussaif, Touria Lambarki El Allioui, CNESTEN (Morocco)
- 15. Curing Time Effect on the Fraction of 137CS from Immobilized Radioactive Evaporator Sludge by Cement (wP 59006)

 Ilija Plecas, Vinca Institute (Serbia)
- 16. Bayesian Statistics Applied to the Activities of Waste Drums (wP 59081)

 Richard Bull, Ian Adsley, Nuvia Ltd (UK)
- 17. A Numerical Interpretation of Density Homogenization of Bentonite Material in Wetting Process (wP 59153)

Atsushi Iizuka, Yusuke Takayama, Kobe University; Shinya Tachibana, Saitama University; Shintaro Ohno, Kajima Corporation; Ichizo Kobayashi, Kajima Corporation; Katsuyuki Kawai, Kobe University (Japan)

- 18. 130 Ways to Deal with Waste...and Counting (wP 59273)

 George Knight, Sarah Greenwood, Areva RMC; Andrew Laker, LLWR; David Rossiter,
 LLW Repository Ltd. (UK)
- 19. A Comprehensive Data Base of Time-Dependent Hydraulic and Transport Parameters for Concrete Engineered Barriers (wP 59299)

 Suresh Seetharam, Janez Perko, Dirk Mallants, SCK-CEN (Belgium)
- 20. Comparison of Organic and Inorganic Ion Exchangers for the Treatment of Radioactive Liquid Wastes by Ion Exchange Processes (wP 59107)

 Yves Barre, CEA Marcoule (France)
- 21. Physical Modelling of Turbulent Jets for Nuclear Sludge Mobilisation (wP 59147)

 Donna McKendrick, Institute of Particle Science and Engineering; Chetan Lakhanpal,

 Simon Biggs, Michael Fairweather, James Young, University of Leeds, Leeds (UK)
- 22. Detritiation of JET Plasma Facing Components (wP 59345)

 Pierre Trabuc, Karine Liger, CEA (France)
- 23. Jet Mixing in Long Horizontal Cylindrical Tanks (wP 59178)

 Charlotte Barbier, Lee Hively, Bob Schlicher, Tracy Warren, Oak Ridge National Laboratory (USA)
- Radiation Protection Experiences in Retrieval of Radioactive Waste at Püspökszilágy Repository (wP - 59054)
 - László Juhász, National Research Institute for Radiobiology and Radiohygiene; Sándor Kapitány, István Barnabás, Public Limited Company for Radioactive Waste Management; Anna Mária Motoc, National Research Institute for Radiobiology and Radiohygiene (Hungary)
- 25. Experimental Drop Testing of Waste Containers for the KONRAD Repository (w/oP 50269)
 - **Tino Neumeyer**, Karsten Müller, Holger Voelzke, Gregor Nieslony, Federal Institute for Materials Research and Testing (BAM) (Germany)

- 26. Experimental Drop Testing of LLW Containers (wP 59142)

 Thomas Quercetti, Andre Musolff, Karsten Müller, BAM Federal Institute for Materials Research and Testing (Germany)
- 27. Self Cleaning HEPA Filtration Without Interrupting Process Flow (wP 59347)

 Chris Chadwick, Porvair Filtration Group (UK)
- 28. Steam and Condensate Tolerant HEPA Filter Substitute for ESP (wP 59346)

 Chris Chadwick, Porvair Filtration Group (UK)
- 29. Design and Operation of the Combined Technology Automated Waste Characterization System (wP 59308)

John Mason, Marc R Looman, Robert A. Price, A. N. Technology Ltd. (UK)

SESSION 10

Tuesday: 8:30am - 12:30pm

PANEL: EMERGING ISSUES IN THE MANAGEMENT OF I/ILW (1.16)

Co-Chairs: Michel Dutzer, Andra (France) Angie Jones, AMEC (USA)

Organizer(s): Michel Dutzer

This panel will focus on strategies for the management of all low and intermediate level waste (L/ILW). Based on experience in different national programs, it will discuss various options and their merits for managing L/ILW. It will consider the definition of different categories of L/ILW and their potential routes for disposal including waste of very low activity, often arising in high volumes as contaminated land, or from decommissioning. There will be discussion on large, disused components that are part of the decommissioning L/ILW waste stream. The engineering of facilities for the disposal of all such wastes should be proportionate to the long-term environmental impact that might arise. The panel will include leaders in the area of radioactive waste management from the US DOE, UK Nuclear Decommissioning Authority, IAEA, and leadership from other representative countries.

SESSION 11

Tuesday: 8:30am - 12:30pm

PANEL: HOW CAN NETWORKS IMPROVE THE IMPLEMENTATION OF ER PROJECTS? THE IAEA NETWORK ON ENVIRONMENTAL MANAGEMENT AND REMEDIATION-ENVIRONET (4.15)

Co-Chairs: Leo van Velzen, EURSSEM, NRG (Netherlands)

Horst Monken Fernandes, IAEA, (Austria)

Organizers: Horst Monken Fernandes

This panel introduces the IAEA's Network on Environmental Management and Remediation - ENVIRONET. It will discuss how networks can improve the implementation and results of ER Projects and the status of the ENVIRONET after more than two years of operation. Panellists will be from various countries using ENVIRONET.

SESSION 12

Tuesday: 8:30am - 12:30pm

WASTE MINIMIZATION, AVOIDANCE, AND RECYCLING (1.3)

Co-Chairs: Ian Beadle, AMEC (UK)

Kapila Fernando, ANSTO (Australia)

Organizer(s)/Reviewers(s): Ian Beadle and Kapila Fernando

- 1. Waste Minimization by Melting Recycling of Radioactive Metals (wP 59040)

 Thomas Kluth, Ulrich Quade, Siempelkamp Nukleartechnik GmbH (Germany)
- 2. Biodegradable Protective Clothing for a Nuclear Facility (wP 59003)

 Michael Cournoyer, Los Alamos National Laboratory (USA)

- 3. Evaluation of External Exposure During Building and Operation of Concrete Bridges Constructions that Reuse the Conditionally Released Steels (wP 59120) *Michal Panik*, *Tomas Hrncir*, *Vladimir Necas*, *Slovak University of Technology* (Slovakia)
- 4. Treatment of Spent Acidic Decontaminants with a High-Efficiency Cementation Method (wP 59063)

Tsong-Yang Wei, Kou-Ming Lin, Ching-Tu Chang, Ming-Shin Wu, Wen-Chen Lee, Zen-Jeh Chung, Institute of Nuclear Energy Research (Taiwan)

-Break-

- 5. Using Pressure Decay Methodology to Detect Glovebox Glove Failures: Part II (wP 59035)
 - Michael Cournoyer, Los Alamos National Laboratory (USA)
- Methodology for Identification of Conditionally Released Materials from Decommissioning Using the OMEGA Code (wP - 59175)
 Matej Zachar, Vladimír Daniska, DECOM; Vladimir Necas, Slovak University of Technology (Slovakia)
- Impact of Nuclide Vector Composition Contained in Conditionally Released Steel Reused in Motorways Tunnel Scenario on Calculated Individual Effective Doses (wP - 59128)
 - **Tomas Hrncir**, Michal Panik, Vladimir Necas, Slovak University of Technology (Slovakia)
- 8. Evaluation of Technical, Economic and Financial Feasibility for Recycling and Reprocessing of Radioactive Waste from a Remediation Work of Low and Medium Activity for the Extraction of Heavy Minerals (wP 59231)

Rodrigo Raposo de Almeida, Federal Fluminense University, Valter J.G. Mortágua, Industrias Nucleares do Brasil (Brazil)

SESSION 13

Tuesday: 8:30am - 12:30pm

HLW, FISSILE, TRU AND SPENT FUEL SHORT AND LONG-TERM STORAGE ISSUES (2.4)

Co-Chairs: Bill Wilmarth, Savannah River National Laboratory (USA)

Kanwar Raj, Bhabha Atomic Research Center (India)

Organizer(s): James Blankenhorn and Kanwar Raj

Reviewers(s): Bill Wilmarth and Kanwar Raj

- 1. West Valley Demonstration Project High Level, Transuranic, and Greater than Class C Wastes (wP 59048)
 - James Blankenhorn, West Valley Environmental Services URS (USA)
- High-Burnup Fuel Issues for Long-Term Dry-Cask Storage and Transportation (wP 59298)
 - Mike Billone, Yung Liu, Mark Nutt, Argonne National Laboratory; Ken Sorenson, Sandia National Laboratories (USA)
- 3. Generic Design Assessment of Long-Term Spent Fuel Storage for New Reactors in the UK (wP 59174)
 - Christopher Fisher, Nuclear Directorate, Health and Safety Executive (UK)
- 4. Managing Aging Effects on Used Fuel Dry Cask for Very Long-Term Storage (wP 59067)

Omesh Chopra, David Ma, Vik Shah, Shiu-Wing Tam, Arun Wah, ANL; **Yung Liu,** Mark Nutt, Argonne National (USA)

-Break-

- Industrial Complementarities between Interim Storage and Reversible Geological Repository (wP - 59237)
 Jean-Michel Hoorelbeke, Andra (France)
- 6. Recent Developments in Spent Fuel Management in Norway (wP 59260)

 Peter Bennett, Barbara Oberlander, Institute for Energiteknikk (Norway)

7. Advanced Surveillance Technologies for Used Fuel Long-Term Storage and Transportation (wP - 59032)

Hanchung Tsai, Yung Liu, Mark Nutt, Argonne National Laboratory; James Shuler, US DOE (USA)

SESSION 14

Tuesday: 8:30am - 12:30pm

D&D OF POWER REACTORS AND RESEARCH REACTORS (3.9)

Co-Chairs: Jean-Marie Cuchet, BELGONUCLEAIRE (Belgium)

Anibal Taboas, Consultant (USA)

Organizer(s): Jean-Marie Cuchet and Jas Devgun Reviewer(s): Jean-Marie Cuchet and Anibal Taboas

- 1. DfD An Approach to New Reactor Designs (wP 59197)

 Jas S. Devgun, Sargent & Lundy (USA)
- 2. Full System Decontamination (FSD) Prior to Decommissioning (wP 59189)

 Christoph Stiepani, Areva NP GmbH (Germany)
- 3. Feedback from Westinghouse Experience on Segmentation of Reactor Vessel Internals (wP 59013)

Joseph Boucau, Westinghouse Electric Company (Belgium); Stefan Fallström, Per Segerud, Westinghouse Electric Sweden (Sweden); Paul Kreitman, Westinghouse Electric Company (USA)

4. Update on Jose Cabrera NPP Decommissioning (wP - 59322)

Juan Santiago, Nieves Martin, Manuel Rodriguez, ENRESA (Spain)

–Break–

5. The Removal, Transportation and Final Treatment and Conditioning of the Thetis Research Reactor Spent Fuel of the University of Ghent (Belgium) Achieved in 2010 Authors (wP - 59261)

Hubert Thierens, Myriam Monsieurs, Ghent University; Vincent De pooter, Marnix Braeckeveldt, NIRAS/ONDRAF; Luc Noynaert, SCK"CEN; Patrick Lewandowski, Belgoprocess; Patrick Maris, SCK"CEN (Belgium)

- 6. Brennilis NPP and Its Territorial Context (wP-XXXX)

 Jean-Christophe Couty, EDF
- 7. The Decommissioning of the Ciemat Nuclear Research Centre (wP 59321) Juan Santiago, Sergio Vidaechea, Manuel Ondaro, ENRESA (Spain)
- 8. The Chooz A Reactor Dismantling Project (wP 59363)

 Estelle Grevin, EDF (France)

SESSION 15

Tuesday: 8:30am - 10:15am

THE FRENCH D&D ACTIVITIES - ORGANIZATION, STRATEGY, OBJECTIVES AND EXPERIENCE (3.2)

Co-Chairs: Jean-Guy Nokhamzon, CEA/DEN/DADN (France)

Andy Szilagyi (US DOE)

Organizer(s): Jean-Guy Nokhamzon

Reviewer(s): Jean-Guy Nokhamzon and Andy Szilagyi

- 1. CEA's Decommissioning Policy and Strategies Lessons Learned (wP 59203)

 Philippe Guiberteau, Didier Dall'ava, CEA; Jean-Guy Nokhamzon, CEA/DEN/DADN
 (France)
- 2. Cleansing and Dismantling of CEA-Saclay Nuclear Licensed Facilities (wP 59227)

 Michel K. Jeanjacques, Rebecca Glévarec, Isabelle Delaire, Jean Louis Martin,

 Commissariat à l'Energie Atomique et aux energies Alternatives (France)
- 3. Areva Return on Experience from D&D Programme Management What We Have Learned So Far? (wP 59324)

Thierry Varet, Areva; Jean-Michel Chabeuf, **Grégoire de Laval**, Guy Decobert, Frédéric Chambon, Areva Nuclear Site Value Development BU (France) Page 44 — Technical Sessions

Technical Sessions — Page 45

4. Decontamination and Dismantling of CENDRILLON Transfer Systems for Radioactive Liquid Solutions (wP - 59336)

Michel K Jeanjacques, Frédéric Masure, Alternative Energies and Atomic Energy Commission (France)

SESSION 16

Tuesday: 10:45am - 12:30pm

NATIONAL AND INTERNATIONAL D&D PROGRAMS (3.3)

Co-Chairs: Sean Bushart, EPRI (USA)

Dominique Greneche, Consultant (France)

Organizer(s): Jas Devgun and Thierry Varet

Reviewer(s): Sean Bushart and Dominique Greneche

- 1. Particularities of ChNPP Site Remediation During its Decommissioning (wP 59193)

 Sergii Mitichkin, Valeriv Seyda, Chernobyl NPP (Ukraine)
- 2. Division of Nuclear Liabilities Between Different License Holders and Owners (wP 59214)

Staffan Lindskog, Swedish Radiation Safety Authority; Rolf Sjöblom, Tekedo AB (Sweden)

- 3. Spanish Approach to Large Decommissioning Projects (wP 59320)

 Juan Santiago, Aleiandro Rodríguez, ENRESA (Spain)
- 4. Decommissioning of Obsolete Nuclear Facilities in the Nuclear Research Institute Rez (wP 59309)

Josef Podlaha, Karel Svoboda, Nuclear Research Institute Rez; Eduard Hanslik, T.G.M. Water Research Institute (Czech Republic)

SESSION 17

Tuesday: 8:30am - 10:15am

APPLYING STRATEGIC PLANNING, DECISION-MAKING AND RISK REDUCTION METHODOLOGIES IN EM (5.7)

Co-Chairs: Roger Seitz, Savannah River National Laboratory (USA)

Dominique Francois-Bongarcon, Agoratec (France)

Organizer(s): Roger Seitz

Reviewer(s): Roger Seitz and Dominique François-Bongarcon

1. Prioritization Risk Integration Simulation Model (PRISM) for Environmental Remediation and Waste Management (wP - 59247)

Ian Miller, GoldSim Technology Group; Ralph Stoll, David Pentz, **John Greeves**, Franklin Sheppard Jr., Predicus LLC; Mark Nutt, Argonne National Laboratory (USA)

2. Can Sustainability Be Applied to our Environmental Remediation Challenges? (wP - 59148)

Peter Booth, NNL (UK)

3. Nuclear Facility Recycle & Transitioning Former Nuclear Materials Production to Energy / Industrial Parks (wP – 59276)

Dennis Ferrigno, Shaun McCabe, Rod Strand, CAF & Associates, LLC; Mark Kirshe, Consultant (USA)

4. Evolution of Performance Assessment Modeling in the US (wP - 59334) Paul Black, John Tauxe, Neptune and Company, Inc.(USA)

SESSION 18

Tuesday: 10:45am - 12:30pm

ECONOMIC ANALYSES, MONITORING STRATEGIES AND PROJECT MANAGEMENT IN ENVIRONMENTAL MANAGEMENT (5.6)

Co-Chairs: Yvette Collazo, US DOE (USA)

Paul Black, Neptune and Company, Inc. (USA)

Organizer(s): Judy Connell and Yvette Collazo Reviewer(s): Yvette Collazo and Paul Black

- 1. Lessons Learned in Environmental Project Management (w/oP 59230) Chuan-Fu Wu, US DOE (USA)
- 2. How Robust is the Plan? Managing the Nuclear Estimate (wP 59253)

 Alastair Laird, Project Time & Cost Inc. (USA)
- 3. The Technical and Economical Optimization of the French Geological Repository Project (wP 59275)

 Rodolphe Raffard, Thibaud Labalette, Andra (France)
- 4. The Environmental Monitoring System Developed within the Framework of the French Radioactive Waste Deep Repository Project (w/oP 59296)

 Elisabeth Leclerc, Patrick Landais, Andra (France)

SESSION 19

Tuesday: 8:30am - 5:45pm

POSTER SESSION: SPENT FUEL, FISSILE, TRANSURANIC AND HIGH LEVEL WASTE MANAGEMENT (2.1)

Co-Chairs: Ed Bentz, EJ Bentz & Associates (US)

Heather Klebba, NFT (US) Gerald Ouzounian, Andra (France) Natraj Iyer, SRNL (USA)

Reviewer(s): Heather Klebba, Gerald Ouzounian, and Ed Bentz

1. Development of Comprehensive Techniques for Coastal Site Characterization: Integrated Palaeohydrogeological Approach for Development of Site Evolution Models (wP - 59259)

Kenji Amano, Tadafumi Niizato, Kunio Ota, Japan Atomic Energy Agency (Japan); Bill Lanyon, Nagra; W. Russell Alexander, Bedrock Geosciences (Switzerland)

2. ADONIS, High Count Rate HP-GeLi Spectrometry Algorithm: Irradiated Fuel Assembly Measurement (wP - 59234)

Patrick Pin, Areva NC La Hague; Eric Barat, Thomas Dautremer, Thierry Montagu, Stéphane Normand, CEA - Saclay (France)

- 3. Technical Know-How for the Investigation and Modeling of Topographical Evolution for Site Characterization (wP 59171)
 - **Ryosuke Doke,** Ken-ichi Yasue, Tadafumi Niizato, Akio Nakayasu, Japan Atomic Energy Agency (Japan)
- 4. Validation of Correlations Between Nd Isotopes and Difficult-to-Measure Nuclides Predicted with a Burn-up Calculation Code by Post Irradiation Examination (wP 59086)

Shiho Asai, Keisuke Okumura, Yukiko Hanzawa, Hideya Suzuki, Masaaki Toshimitsu, Jun Inagawa, Takaumi Kimura, Japan Atomic Energy Agency; Satoru Kaneko, Kensuke Suzuki, Tokyo Electric Power Company (Japan)

 Computational Study for Inventory Estimation of Se-79, Tc-99, Sn-126, and Cs-135 in High-Level Radioactive Wastes from Spent Nuclear Fuels of Light Water Reactors (wP - 59087)

Keisuke Okumura, Shiho Asai, Yukiko Hanzawa, Tsutomu Okamoto, Hideya Suzuki, Masaaki Toshimitsu, Jun Inagawa, Takaumi Kimura, Japan Atomic Energy Agency; Satoru Kaneko, Kensuke Suzuki, Tokyo Electric Power Company (Japan)

- 6. Technical Know-How of Site Descriptive Modeling for Site Characterization (wP 59089)
 - Hiromitsu Saegusa, Tadafumi Niizato, Ken-ichi Yasue, Hironori Onoe, Ryosuke Doke, Japan Atomic Energy Agency (Japan)
- 7. Industrial Scale HL-LL Waste Canister Transfer Demonstrator (wP 59305)

 Pascal Champ, Cegelec (France)
- 8. CESAR Code: An Industrial Tool for Irradiated Nuclear Fuel and Waste Characterization, with an Associated Qualification (w/oP 59080)

 Jean-Marc Vidal, Romain Eschbach, Commissariat à lÉnergie Atomique Énergies Alternatives; Agnes Launay, Christophe Binet, Areva NC (France)
- 9. Test Procedure with a 15,000 kg Half-Scale Prototype of Transport and Storage Cask (w/oP 59141)

Andre Musolff, Thomas Quercetti, Karsten Müller, BAM - Federal Institute for Materials Research and Testing (Germany)

- 10. Capillary Electrophoresis with Laser-Induced Fluorescent Detection Method using Highly Emissive Probes for Analysis of Actinides in Radioactive Wastes (wP 59092) Tomoko Haraga, Japan Atomic Energy Agency; Yuta Nakano, Masami Shibukawa, Saitama University; Yutaka Kameo, Kuniaki Takahashi, Japan Atomic Energy Agency; Shingo Saito, Saitama University (Japan)
- 11. Transuranic Waste Disposal Facility Performance Assessment Results (w/oP 59064) Sean Dunagan, Daniel J. Clayton, Moo Lee, Sandia National Laboratories (USA)
- 12. Application of Coupled Thermo-Hydro-Mechanical-Chemical (THMC) Process in Hydrothermal Systems to Process near a High-Level Nuclear Waste Repository (wP 59246)

Geoffrey Peter, Oregon Institute of Technology Portland Center (USA)

13. A New Way of Eliminating Tributylphosphate and Dodecane Mixtures Using Advanced Oxidation Techniques (w/oP - 59104)

Geraldine Dupuy, DEWDROPS (France)

SESSION 20

Tuesday: 1:45pm-6:00pm

PANEL: CHALLENGES WHEN SELECTING DISPOSAL OPTIONS IN THE LIGHT OF THE NEW IAEA CLASSIFICATION SCHEME (1.17)

Co-Chairs: Peter Ormai, IAEA (Austria)

Angie Jones, AMEC (USA)

Organizer(s): Peter Ormai

This panel will provide a forum for the exchange of scientific and technical information on disposal of different categories of radioactive waste with focus on current approaches. It will begin by presentations and conclude with a panel. The session will start with short presentations from different countries on:

- Disposal of Intermediate Level Waste -the Japan Approach
- Disposal of Low Level Long-Lived Waste (Graphite Waste, Radium Bearing Waste) the French Approach
- What are the Safety and Technical Factors that should be Taken into Account when Considering Borehole Disposal (BOSS)? the South African Approach
- What are the Implications (Safety, Economic, Technical) of the Co-Disposal of Different Categories of Waste?- *the Swedish or Swiss Approach*
- Pros and Cons for Selecting Disposal Options for L/ILW the Hungarian Approach

The following topics are to be discussed by the panel members with an opportunity for interaction with the audience:

- Near Surface or Geological for SL-LILW?
- Is Separate Disposal for SL-L/ILW and Very LLW Justified?
- What are the Advantages and Disadvantages of Opting for Co-Disposal?

- Is the Borehole Disposal the Solution for the Countries Having Limited Waste Inventories?
- What are the Feasible Approaches for Disposal of Low Level Long-Lived Waste?

Panelists will include the presenters and other invited experts.

SESSION 21

Tuesday: 1:45pm - 3:30pm

PANEL: CONTRIBUTION AND COMPLEMENTARITIES OF INTERIM STORAGE, GEOLOGICAL DISPOSAL, PARTITIONING & TRANSMUTATION REVERSIBILITY REGARDING GLOBAL OPTIMIZATION OF RADWASTE MANAGEMENT (2.15)

Co-Chairs: Jean-Michel Hoorelbeke, Andra (France)

Heather Klebba, NFT (USA)

Organizer(s): Jean-Michel Hoorelbeke

Session 21 is a two part panel in conjunction with the following Session 22. The first part will address the status of HLW and Spent Fuel interim storage, processing and national programs. Partitioning and transmutation are also investigated in several countries. Interim storage is required to accommodate waste as long as sustainable management solutions are not available and interim storage duration up to 100 years has been often considered.

SESSION 22

Tuesday: 4:15pm - 6:00pm

PANEL: CONTRIBUTION AND COMPLEMENTARITIES OF INTERIM STORAGE, GEOLOGICAL DISPOSAL, PARTITIONING & TRANSMUTATION REVERSIBILITY REGARDING GLOBAL OPTIMIZATION OF RADWASTE MANAGEMENT (2.13)

Co-Chairs: Jean-Michel Hoorelbeke, Andra (France)

Heather Klebba, NFT (USA)

Organizer(s): Jean-Michel Hoorelbeke

The second part of this two part panel will discuss final disposition and geological disposal issues since it is internationally recognized as the reference option for long term management of high level and TRU waste, or non reprocessed spent fuel. Nevertheless the progress of geological repositories varies significantly from one country to another. In many cases some reversibility or retrievability is expected by stakeholders.

Specialists know that geological repository will not suppress the need for interim storage, and that partitioning and transmutation cannot suppress the need for geological disposal. The panel will discuss the potential complementarities of these various waste management tools, or their incompatibilities if any, with regard to possible optimization of the whole system. Different time scales and types of waste will be considered as necessary. Panelists will include participants from NEA, CEA, Andra, SKB, Posiva and WIPP.

SESSION 23

Tuesday: 1:45pm - 3:30pm

ADVANCED L/ILW CONDITIONING TECHNOLOGIES – PART 1 OF 2 (1.11)

Co-Chairs: Adrian Punt, AMEC (UK)

Mike Garamszeghy, Nuclear Waste Management Organization (Canada)

Organizer(s): Angie Jones

Reviewer(s): Adrian Punt and Mike Garamszeghy

1. Cementitious Materials for Radioactive Waste Management within IAEA Coordinated Research Project (wP - 59021)

Zoran Drace, IAEA (Austria); Michael Ojovan, University of Sheffield (UK)

2. Immobilisation of Radwaste in Synthetic Rock: An Alternative to Cementation (wP - 59008)

Bernard Rottner, Onet Technologies (France)

- 3. Withdrawal, Treatment and Conditioning of Spent Ion-Exchange Resins into Aluminosilicate SIAL® Matrix for the NPP with VVER 440-type Reactor at Dukovany, Czech Republic (wP 59226)
 - Milena Prazska, Peter Tatranský, Stanislav Sekely, AMEC Nuclear Slovakia s.r.o. (Slovakia) Petr Kopecky, CEZ a.s. (Czech Republic)
- 4. Elution Behavior of Heavy Metals from Cement Solidified Products of Incinerated Ash Waste (wP 59102)

Yoshihiro Meguro, Yoshimi Kawato, Takuya Nakayama, Osamu Tomioka, Japan Atomic Energy Agency (Japan)

SESSION 24

Tuesday: 4:15pm - 6:00pm

L/ILW WASTE CHARACTERIZATION, ASSAY, AND TRACKING SYSTEMS - PART 1 OF 2 (1.7)

Co-Chairs: Karan North, Magnox Ltd (UK)

Jerome Bruzière, Areva (France)

Organizer(s): Ronald Keyser and Karen North

Reviewer(s): Karen North and Jerome Brueziere

1. A Proposed Figure of Merit for Evaluating the Performance of Radiation Identification and Detection Systems (wP - 59159)

Ronald Keyser, Timothy Twomey, ORTEC - AMETEK (USA)

2. Characterization of Legacy Low Level Waste at the SVAFO Facility Using Gamma Non-Destructive Assay and X-Ray Non-Destructive Examination Techniques (wP - 59289)

Stephen Halliwell, VJ Technologies Inc (USA)

- 3. Design, Operation and Calibration of a Wide Range Segmented Gamma Ray Scanning Instrument for the Measurement of Low and Intermediate Level Waste (wP 59304)
 - **John Mason**, A. N. Technology Ltd (UK); Kapila Fernando, ANSTO, Australia Nuclear Science and Technology Organization (Australia)
- 4. Performance of a DrumScan® HRGS Solo Scanner for the Assay of Legacy Waste at the Belgoprocess Site (wP 59122)

Daniel Parvin, Babcock International Group (UK); Thomas Huys, Belgoprocess (Belgium)

SESSION 25

Tuesday: 1:45pm - 6:00pm

D&D OF NON-REACTOR NUCLEAR FACILITIES (3.10)

Co-Chairs: Ken Kok, URS (USA)

Lucien Pillette-Cousin, Areva (France)

Organizer(s): Jas S. Devgun and Jean-Guy Nokhamzon

Reviewer(s): Ken Kok and Lucien Pillette-Cousin

1. Decommissioning the Belgonucleaire Dessel MOX Plant: Presentation of the Project and Situation on 31/12/2010 (wP - 59027)

Jean-Marie Cuchet, Carlo Verheyen, Henri Libon, BELGONUCLEAIRE; Jos Custers, TECNUBEL; Robert Walthery, BELGOPROCESS (Belgium); Jozef Bily, STUDSVIK GmbH (Germany)

2. Uranium Workshops Dismantling and Criticality Control (wP - 59060)

Pierre Lisbonne, Julie Rosello, CEA (France)

- 3. Decommissioning & Demolition of Facilities Used for the Storage & Stabilisation of Water Reactor Sludge (wP 59097)
 - Nicholas J Brown, Nuvia Limited; Rowland Cornell, Nuvia Limited; Andy Staples, RSRL (UK)
- 4. The Complex Challenge of Refurbishing the Pond Gantry Steelwork Which Supports the Pond Skip Handler Above the First Generation Magnox Storage Pond at Sellafield (wP 59133)

 Ian Richardson, Sellafield (UK)

----Break-

5. A Successful Transition from Operating to Dismantling a UO2-PuO2 Fuel Fabrication Facility (wP - 59326)

Thierry Flament, Areva NC (France)

- 6. Systematic Chemical Decontamination using IF, Gas (wP 59036)

 Haruhi Hata, Kaoru Yokoyama, Noritake Sugitsue, Japan Atomic Energy Agency (Japan)
- 7. D&D of CIEMAT Nuclear Research Centre (wP 59155)

 Paloma Diaz Arocas, Almudena Garcia, Julio Torre, Alfonso Martinez, CIEMAT;

 Cristina Garrido, Iberdrola Ingenieria y Construcción; Ernesto Argiles, Lainsa, Las

 Rozas (Spain)
- 8. Decommissioning of the Radio Chemical Hot Laboratory of the European Commission Joint Research Centre of Ispra (wP 59207)

 Daniele Ugolini, Francesco Rossi, Francesco Basile, European Commission Joint

Research Centre (Italy)

SESSION 26

Tuesday: 1:45pm - 6:00pm

D&D TECHNOLOGIES - PART 1 OF 2 (3.4)

Co-Chairs: Jas S. Devgun, Sargent & Lundy (USA)

Jean-Guy Nokhamzon, CEA (France)

Organizer(s)/Reviewers(s): Jas Devgun

- 1. Low Hazard Decommissioning of Plutonium Contaminated Plant (wP 59218) Stephen Hepworth, Stephen Meechan, Sellafield Ltd. (UK)
- 2. Dismantling/Remediation of a Highly Contaminated Sump in Running Plant Conditions (wP 59053)

Jos Boussu, Koen Lenie, Tecnubel (Belgium)

- 3. New Degreasing Formulations for the Decontamination of Solid Substrates, Consistent with Vitrification Process of the Final Wastes (wP 59166)

 Jeremy Causse, Cyril Roussignol, French Atomic Energy Commission; Jean-François Valery, Jean Charles Hamel, Areva NC (France)
- 4. Decommissioning of the UF6 Sphere (wP 59200)

 Didier Métral, ONET Technologies ONECTRA (France)

-Break-

Remote Decommissioning of Blind Cells - APM 214 Facility CEA Marcoule (wP -59206)

Thomas Garnier, ONET Technologies - ONECTRA (France)

6. Liquids, Gels, Foams and Supercritical Fluids: 4 Matter's States for Radioactive Decontamination of Solids (wP - 59158)

Sylvain Faure, Commissariat à l'Energie Atomique - DEN; Jérémy Causse, Bruno Fournel, CEA Commissariat à l'Energie Atomique (France)

- 7. Decommissioning of the A-1 NPP Heavy Water Evaporator Facility (wP 59225)

 Jan Medved, VUJE Inc.; Ladislav Vargovcik, ZTS VVU Kosice; Igor Vykukel, JAVYS
 (Slovakia)
- 8. Transport of Nuclear Waste Flows A Modeling and Simulation Approach (wP 59136)

Jonathan Adams, Michael Fairweather, James Young, Simon Biggs, Jun Yao, University of Leeds (UK)

SESSION 27

Tuesday: 1:45pm - 6:00pm

ER SITE CHARACTERIZATION AND MONITORING - PART 1 OF 2 (4.5)

Co-Chairs: Virgene Mulligan, ARS International (USA)

Nicolas Jeannée, Géovariance (France)

Organizer(s): Steve Brown and Didier Dubot

Reviewer(s): Virgene Mulligan and Nicolas Jeannée

- 1. Soils Radiological Characterization Under a Nuclear Facility (wP 59046)

 Emilie Aubonnet, Geovariances / CEA FAR; Didier Dubot, CEA/FAR/USLT/SPRE/SAS
 (France)
- Radiological Evaluation of Contaminated Sites and Soils VEgAS: An Expertise and Investigating Vehicle (wP - 59057)
 Julien Attiogbe, GEOVARIANCES; Marie Lavielle, Patrick De Moura, CEA (France)
- 3. Determination of the Radionuclide Contamination on the Absheron Peninsula in Azerbaijan (wP 59177)

Tjalle Vandergraaf, Providence College (Canada); Gudrat Mamedov, Mahammadali Ramazanov, Baku State University; Jalal Naghiyev, Institute of Radiation Problems; Afat Mehdiyeva, National Aerospace Agency of Azerbaijan; Nazim Huseynov, Institute of Radiation Problems (Azerbaijan)

4. High-Density Gamma Radiation Spectrometry Surveys of Contaminated Land (wP - 59076)

Mike Davies, Robert Clark, Nuvia Limited (UK)

-Break-

- 5. Characterization of a Deep Radiological Contamination: Integration of Geostatistical Processing and Historical Data (wP 59062)
- Yvon Desnoyers, GEOVARIANCES; Patrick De Moura, CEA (France)6. Industrial Experience Feedback of a Geostatistical Estimation of Contaminated Soil

Volumes (wP - 59181)
Claire Faucheux, Nicolas Jeannée, GEOVARIANCES (France)

7. Remediation and Assessment of the National Radioactive Waste Storage and Disposal Site in Tajikistan (wP - 59110)

Tjalle Vandergraaf, Providence College (Canada); Nazirzhon Buriev, Djamshed Abdushukurov, Physical-Technical Institute of the Academy of Sciences of the Republic of Tajikistan (Tajikistan)

8. Integrating History and Measurement into a Case for Site Release (wP - 59131)

Mike Davies, Nuvia Limited; Angela Bartlett, Research Sites Restoration Limited; Pete
Burgess, Nuvia Ltd; Gavin Coppins, Babcock International Group (UK)

SESSION 28

Tuesday: 1:45pm - 6:00pm

PUBLIC PERCEPTION ISSUES AND STAKEHOLDER ENGAGEMENT STRATEGIES IN RADIOACTIVE ENVIRONMENTAL MANAGEMENT (5.5)

Co-Chairs: Judy Connell, Fluor Government Group (USA)

Sebastien Farin, Andra (France)

Organizer(s): Judy Connell

Reviewer(s): Judy Connell and Sebastien Farin

- 1. Perspectives on Reversibility and Retrievability of a Geological Repository in France (wP 59263)
 - Jean-Noel Dumont, Jean-Michel Hoorelbeke, Andra (France)
- 2. A Dialogue-Centric Approach to Environmental Remediation Decision-Making (wP 59115)

Laurel Boucher, The Laurel Co.; James Clark, CRX Group, Inc. (USA)

- 3. Remediation of NORM Residues Professional Risk Assessment and Public Risk Perception (wP 59216)
 - Claudia Koenig, Patrick Liebig, Beate Riebe, Leibniz University Hannover (Germany)
- 4. Challenge in the Public Acceptance and Cooperation in the Verge of Building the First Nuclear Power Plant in Indonesia (wP 59119)

Putero Susetyo Hario, Santosa Haryono Budi, Gadjah Mada University (Indonesia)
—Break—

5. Andra Long Term Memory Project (wP - 59277)

Patrick Charton, Fabrice Boissier, Guillaume Martin, Andra (France)

- 6. Outreach and Education Ensuring a Clean Energy Future for All (wP 59339)

 Susan Hess. Areva Inc USA)
- 7. Engaging Local Stakeholders on Technical Issues: Test Case at the La Hague Reprocessing Plant (wP 59211) Ludivine Gilli, Institut de radioprotection et de sûreté nucléaire (IRSN) (France)
- 8. Creating and Managing Radioactive Waste Disposal Facilities with the Involvement of the Local Populations (wP 59286)

 Farin Sébastien. Andra (France)
- 9. Stakeholder Participation in the Development of a High-Level Radioactive Waste (HLW) Repository in the US, Japan, UK and Europe (wP 59350)

 William (Bill) Lawless, Paine College (USA)

SESSION 29

Wednesday: 8:30am - 12:30pm

PANEL: DECOMMISSIONING WORK AT THE OECD/NUCLEAR ENERGY AGENCY (3.12)

Co-Chairs: Hans Riotte, OECD/NEA (France)

JAEA Representative

Organizer(s): Hans Riotte and Jean-Guy Nokhamzon

This session will start with presentations and conclude with a panel session. The presentations will include:

- 1. Recent Work And Achievements At The Nuclear Energy Agency In Decommissioning: Claudio Pescatore (OECD/NEA)
- 2. Cooperative Program on Dismantling and Decommissioning (CPD) -Overview, Jan Carlson & Jean-Guy Nokhamzon
- 3. CPD Decontamination and Dismantling of Concrete Structures, *Eric Cantrel* (CEN/SCK/Mol)
- 4. CPD -Experience with Remote Handling Techniques, Pierre Valentin (CEA/DEN/DPAD)

–Break–

- 5. Working Party on Dismantling and Decommissioning (WPDD) Overview, *Ivo Tripputi* (Sogin)
- 6. WPDD -Integration of Waste Management and Decommissioning: The Management of Large Components, *Michel Dutzer* (Andra)
- 7. WPDD -Decommissioning Techniques: Prospects for R &D, Gerard Laurent (EDF/CIDEN)
- 8. WPDD -Decommissioning Costs: Yellow book and Cost Control, *Patrick Devaux* (CEA/DEN/DPAD)
- 9. WPDD -Decommissioning Feedback for New Nuclear Power Plants, *Rateb Abu-Eid* (US/NRC)

The session will end with a panel discussions moderated by **Ivo Tripputi** (Sogin). Panel participants include: **Thomas Kirchner** (EC), **Patrick O'Sullivan** (IAEA), **Juan Luis Santiago** (Enresa), **Andy Szilagyi** (US DOE), **Lydie Evrard** (ASn), **Torsten Carlsson** (Swedish Nuclear Waste Committee), **Gerard Laurent** (EDF/CIDEN)

SESSION 30

Wednesday: 8:30am - 12:30pm

SITING, DESIGN, CONSTRUCTION, AND OPERATION OF L/ILW DISPOSAL

FACILITIES - PART 1 OF 2 (1.12)

Co-Chairs: Philip Rendell, NDA (UK)

Patricia Torres, Andra (France)

Organizer(s): Philip Rendell and Cathy Hickey Reviewer(s): Philip Rendell and Patricia Torres

1. On-Site, Near Surface Disposal of Graphite Wastes in the UK (wP – 59078)

Adam Meehan; Peter Sibley, EnergySolutions; Jeremy Lightfoot, Golder Associates (UK)

Ltd.; Duncan Jackson, Eden Nuclear & Environment Ltd. (UK)

2. Applications of Chemical and Natural Processes to Enhance Long-Term Waste Disposal and Containment (wP – 59085)

Kevin Leary, Paul Beam, US DOE (USA)

3. Product Quality Control of Radioactive Waste with a Special Regard to Federal States Collecting Facilities (w/oP – 59176)

Katharina Aymanns, Markus Havertz, Research Centre Jülich GmbH (Germany)

4. Radiological Impact of Co-Location of the VLLW and LILW Repository at Mochovce Site (wP $-\,59152)$

Václav Hanusík, Zdena Kusovská, Jozef Morávek, VUJE, Inc.; Jozef Baláz, Oto Chren, Nuclear and Decommissioning Company plc. (Slovakia)

-Break-

5. Centre de la Manche: A Disposal Facility in Institutional Control (wP – 59236)

Michel Dutzer, Jean Pierre Vervialle, Alain André, Albert Marchiol, Andra (France)

6. Development of an Engineering Design Process and Associated Systems and Procedures for a UK Geological Disposal Facility (wP – 59160)

Philip Rendell, Brendan Breen, Alastair Clark, NDA (Radioactive Waste Management Directorate); Henry O'Grady, Parsons Brinckerhoff (UK)

7. State of the Art for Fabricating and Emplacing Concrete Containers into Large Horizontal Disposal Caverns in the French Geological Repository (wP – 59267)

Jean-Michel Bosgiraud, Andra (France)

8. Slovenian Low and Intermediate Level Waste Repository (wP – 59161)
Sandi Virsek, ARAO (Slovenian Radwaste Management Agency) (Slovenia)

SESSION 31

Wednesday: 8:30am - 12:30pm

L/ILW WASTE CHARACTERIZATION, ASSAY, AND TRACKING SYSTEMS - PART 2 OF 2 (1.18)

Co-Chairs: Ronald Keyser, ORTEC - AMETEK (USA)

Jerome Bruzière, Areva (France)

Organizer(s): Ronald Keyser and Karen North

Reviewer(s): Ronald Keyser and Jerome Bruzière

1. Non-Destructive Examination of TRU Waste in Low and High Density Boxes and Drums, Using High Energy Real Time Radioscopy (HE-RTR) and Wide Dynamic Range Imaging (wP $-\,59302)$

Stephen Halliwell, VJ Technologies Inc. (USA)

2. Measurement Methodology for Fulfilling of Waste Acceptance Criteria for Low and Intermediate Level Radioactive Waste in Storages (wP – 59016)

Marina Sokcic-Kostic, Felix Langer, Roland Schultheis, NUKEM Technologies GmbH (Germany)

3. Detection of Sealed Radioactive Sources in Radioactive Waste by Non-Destructive Assay Techniques (wP – 59252)

Leo P.M. Velzen, Nuclear Research Group; Steven van der Marck, Nuclear Research Group (Netherlands)

4. The Pervasiveness of Radioactive Contamination in Concrete and Cement (wP – 59317)

David Read, University of Loughborough; Antoni E. Milodowski, British Geological Survey (UK)

-Break-

- 5. Disposition of Transuranic Residues from Plutonium Isentropic Compression Experiment (Pu-ICE) Conducted at Z Machine (LA-UR-10-05649) (wP 59186) Kapil K. Goyal, David M. French, Los Alamos National Laboratory; Betty J. Humphrey, Weston Solutions Inc.; Jeffry Gluth, Ktech Corporation, Sandia National Laboratory (USA)
- 6. B-5. Use of Lanthanum Bromide Detectors to Augment Site Surveys for Depleted Uranium (wP-59169)

Charles Waggoner, Mississippi State University; Ronald Unz, Institute for Clean Energy Technology; Donna Rogers, Mississippi State University (USA)

 Ultrasonic Techniques for the In Situ Characterization of 'Legacy' Waste Sludges & Dispersions (wP – 59111)

Timothy Hunter, Jeff Peakall, Simon Biggs, Michael Fairweather, James Young, University of Leeds, Leeds (UK)

8. NEW Free-Release and Sorting Monitors Developed for NPP A-1 Decommissioning, Slovakia (oP – 59071)

Ondrej Slávik, Alojz Ślaninka, Martin Lištjak, Kamil Kravárik, VUJE, A,s Igor Pély (Solvakia)

SESSION 32

Wednesday: 8:30am - 12:30pm

REPOSITORY PROGRAMS: SITE SELECTION & CHARACTERIZATION, UNDERGROUND RESEARCH LABS, ENGINEERING & GEOLOGICAL BARRIERS - PART 1 OF 2 (2.3)

Co-Chairs: Irina Gaus, Nagra, (Switzerland)
Jean-Paul Chiles, Ecole Mines (France)

Organizer(s): Irina Gaus and Johan Andersson Reviewers(s): Irina Gaus and Jean-Paul Chiles

1. Safety Assessment Input to Site Selection - The Swedish Example (wP - 59031)

Johan Andersson, JA Streamflow AB (Sweden)

2. Technical Know-How of Selection Process for the Horonobe Underground Research Laboratory Area and Site (wP – 59088)

Takanori Kunimaru, Ryuji Takeuchi, Tatsuji Matsuzaki, Japan Atomic Energy Agency (Japan)

3. Characterization of Bedrock Hydrogeology at the Olkiluoto Site Using Surface Based and Underground Data (wP – 59095)

Lee Hartley, Dave Swan, Steven Baxter, Serco (UK)

4. Development of Quality Management System for Site Characterization Programmes - Experience in Japan (wP - 59125)

Kunio Ota, Takanori Kunimaru, Kenji Amano, Japan Atomic Energy Agency (Japan); W Russell Alexander, Bedrock Geosciences (Switzerland)

–Break–

5. Compliance-Based Site Characterization (wP – 59173)

Ian Miller, GoldSim Technology Group; Mark Nutt, Argonne National Laboratory; Michael D. Voegele (USA)

6. Self-Disposal Option for Heat-Generating Waste (wP – 59182)

Michael Ojovan, University of Sheffield (UK); Pavel Poluektov, Vladimir Kascheev, A.A.

Bochvar's VNIINM (Russia)

7. Modeling Approaches for Evaluating the Effects of Heterogeneity on Two-Phase Flow associated with the Migration of Waste-Generated Gas from SF/HLW- and L/ILW Repositories in Low-Permeability Formation (wP – 59196)

Paul Marschall, Nagra; Rainer Senger, Intera Inc. Swiss Branch; Andrés Alcolea, TK Consult AG; Alexandros Papafotiou, Intera Inc. Swiss Branch (Switzerland); William G. Lanyon, Fracture-Systems Ltd. (UK); Jens Becker, Nagra (Switzerland)

8. Thermo-Hydro-Mechanical Simulation of a Heating and Hydration Experimental Study (China Mock-up) in Unsaturated GMZ Bentonite (wP – 59212) Liang Chen, Ju Wang, Yuemiao Liu, Jingli Xie, Beijing Research Institute of Uranium Geology (China)

SESSION 33

Wednesday: 8:30am - 10:15am

(USA)

RECENT ADVANCES IN PROCESSING AND IMMBOLIZATION OF HLW, FISSLE MATERIAL AND TRANSUANIC (TRU) – PART 1 OF 2 (2.14)

Co-Chairs: Mark Denton, Kurion Inc. (USA)

Bernard Vigreux, Consultant (France)

Organizer(s): Mark Denton and Bill Wilmarth

Reviewer(s): Mark Denton and Bernard Vigreux

1. Uranium Metal Oxidation, Grinding and Encapsulation in BoroBond": TRU Waste Management (wP - 59279)

Kevin S. Cook, Larry A. Addington, Beth Utley, Boron Products, LLC (USA)

- 2. Challenging Solid and Liquid RH-TRU Processing in a Small Hot Cell Facility at Argonne National Laboratory (wP – 59232) Devin Hodge, Argonne National Laboratory; John Mackin, Hukari Technical Services
- 3. The Application of the Dose-to-Curie (DTC) Conversion Characterization Method to Historic Remote-Handled Transuranic (RH-TRU) Waste Streams (wP - 59315) David Moody, URS-WTS; Jesse Klingensmith, Areva (USA)
- 4. Pilot Test of Precipitation Setup for Dust Suppressor and Transuranic Elements Removal from Wastewaters of Chernobyl Nuclear Power Plant (wP – 59256) Valentin Avramenko, Svetlana Bratskaya, Dmitry Marinin, Institute of Chemistry FEBRAS (Russia); Anatoliy Terzi, Mariya Yarmolyuk, Chernobyl Nuclear Power Plant (Ukraine)

SESSION 34

Wednesday: 10:45am - 12:30pm

ER SITE CHARACTERIZATION AND MONITORING - PART 2 OF 2 (4.12)

Co-Chairs: Stéphane Belbeze, ANTEA (France)

Ing. Jeroen Welbergen, Corva (Netherlands)

Organizer(s): Didier Dubot

Reviewer(s): Ing. Jeroen Welbergen and Stéphane Belbeze

- 1. Bulk Monitoring Techniques Used in the Remediation of Radioactively Contaminated Land (wP - 59094)
 - Helen Beddow; Ian Adsley; Mike Davies; Ian Pearman, Pete Burgess, Nuvia Limited
- 2. Sampling in Decommissioning: CETAMA Seminar and International Overview (w/oP - 59209)

Guy Granier, Daniele Roudil, CEA MARCOULE; Didier Dubot, CEA/FAR/USLT/SPRE/SAS (France)

3. Foam - Novel Delivery Technology for Remediation of Vadose Zone Environments (wP - 59019)

Dawn Wellman, Danielle P Jansik, Shas Mattigod, Lirong Zhong, Pacific Northwest National Laboratory; Yuxin Wu, Lawrence Berkeley National Lab; Martin Foote, MSE Technology Applications; Fred Zhang, Pacific Northwest National Lab; Susan Hubbard, Lawrence Berkeley National Lab (USA)

4. Treatability Testing for Removal of Technetium 99 and Uranium from Groundwater at the Hanford Site (w/oP – 59026)

John Morse, U. S. DOE; Sally Simmons, CHPRC; Ronald Smith, Pacific Northwest National Laboratory; Briant Charboneau, DOE RL (USA)

5. Action Plan on Old French Uranium Mines (w/oP - 59359) **Philippe Crochon,** Areva / BG Mines (France)

SESSION 35

Wednesday: 8:30 - 10:15am

URANIUM MINING AND MILLING SITES ER (4.6)

Co-Chairs: Gerald Ouzounian, Andra (France)

Gerd Wiatzka, SENES Consultants Ltd (Canada)

Organizer(s): Steve Brown and Didier Dubot

Reviewer(s): Gerald Ouzounian and Gerd Wiatzka

1. The First New Conventional Uranium Mill in the US in 30 Years - Licensing of the Pinon Ridge Project, Colorado, USA (wP - 59330)

Steve Brown, SENES Consultants Ltd; Frank Filas, Energy Fuels Resources (USA)

2. Phytoremediation of Depleted Uranium from Contaminated Soil and Sediments using Helianthus Annuus L (wP – 59221)

M. A. Amr, Qatar University (Qatar)

3. Mobility of Radium from Pyritic Uranium Mine Tailings Under Sub-aqueous Disposal Conditions (wP - 59283)

Nand Dave, Mining and Mineral Sciences Laboratories, Natural Resources, Canada (Canada)

4. Close-Out of Open Pit and Waste Rock Piles of Daxin Uranium Mine of China (wP -

Xu Lechang, Beijing Research Institute of Chemical Engineering and Metallurgy"CNNC" (China)

SESSION 36

Wednesday: 10:45am - 12:30pm

RADIUM REMEDIATION - HISTORICAL PERSPECTIVES AND CURRENT **CIRCUMSTANCES - PART 1 OF 3 (4.11)**

Co-Chairs: Robert Zelmer, Atomic Energie of Canada Limited (Canada)

Steve Brown, SENES Consultants Ltd (USA)

Organizer(s)/Reviewers(s): Robert Zelmer and Steve Brown

- 1. Sawmill Bay: A Case Study for Low-Level Radioactive Waste Remediation in Canada's North (wP - 59342)
 - Susan Winch, Stephen Livingstone, Franz Environmental Inc.; Julie Ward, Indian and Northern Affairs, Contaminants and Remediation Directorate (Canada)
- 2. Andra's Remediation Missions (w/oP 59210) Patrick Poiret, Eric LANES, Andra (France)

- 3. Remediation of Canadas Historic Haul Route for Radium and Uranium Ores The Northern Transportation Route (wP - 59303)
 - Brian Geddes, Chris Wenzel, AMEC Earth and Environmental; Michael Owen, Mark J. Gardiner, Robert Zelmer, Low-Level Radioactive Waste Management Office, AECL; Julie Brown, Liliana Benitez, Natural Resources Canada (Canada)
- 4. Radium Diagnosis Campaign (wP 59327)

Florence Gabillaud-Poillion, Autorité de Sûreté Nucléaire (France)

SESSION 37

Wednesday: 8:30am - 10:15am

YOUNG GENERATION NETWORK (YGN) AND PROFESSIONAL DEVELOPMENT PROGRAMS (5.16)

Co-Chairs: Corhyn Parr, Nuclear Enterprises (USA)

Amy Bird, UKENS (UK)

Organizer(s): Corhyn Parr

Reviewer(s): Corhyn Parr and Amy Bird

This is a series of presentations followed by panel sessions on YGN and other professional development programs.

1. Nuclear as a Sustainable Energy Source - The Views of Younger Stakeholders (wP – 59222)

Staffan Lindskog, Swedísh Radiation Safety Authority (Sweden); Bea Labor, Badania Dydaktycne Project 2010 (Poland)

2. The Re-establishment of Radiochemistry Academic Programs in the USA (wP – 59025)

Craig Williamson, South Carolina Universities Research and Education Foundation (USA)

SESSION 38

Wednesday: 10:45am - 12:30pm

PANEL: YOUNG GENERATION NETWORK (YGN) AND PROFESSIONAL DEVELOPMENT PROGRAMS (5.17)

Co-Chairs: Corhyn Parr, Nuclear Enterprises (USA)

Amy Bird, UKENS (UK)

Organizer(s): Corhyn Parr

A general YGN Meeting will be conducted to canvass views of the younger members of the industry, exchange knowledge across companies, and grow the YGN network through the conference attendees. This meeting will be used to share best practices, and develop new ideas to progress the aims and objectives of the YGN in the future. Agenda: 1) Introductions; 2) Explanation of YGN Aims and Objectives; 3) Discussion on Output of YGN Questionnaire; 4) Sharing of International YGN Activities and Events; 5) Personal Development and Career Progression; 6) Education and Training Initiatives; 7) Communications across the YGN Network; 8) External Communications to wider industry and 9) Future Plans and New Initiatives.

SESSION 39-A

Wednesday: 8:30am - 5:45pm

POSTER SESSION: DECONTAMINATION AND DECOMMISSIONING (D&D) (3.1)

Co-Chairs: Keith Anderson, ECC (USA)

Didier Delmont, CEA (France)

Reviewer(s): Keith Anderson and Didier Delmont

A-1. Development of Nuclear Facilities Piping Cleaning System Using Microbubble (wP – 59070)

Jongseon Jeon, SangKyu Park, Byoungsub Han, Enesys Co., LTD.; HakSoo Kim, Nuclear Engineering & Technology Institute; Wisoo Kim, Enesys Co., LTD. (Korea Republic)

A-2. Nitrojet®: A Versatile Tools for Decontamination, Cutting and Concrete Scabbling (wP - 59282)

Fabrice Moggia, Ahmed Benamane, **Pierrick Menegon**, Frédérique Damerval, Valérie Toulemonde, Thierry Varet, Areva; Frédéric Richard, Air Liquide; Gary Anderson, Nitrocision (France)

- A-3. Methodology of External Exposure Calculation for Reuse of Conditional Released Materials from Decommissioning (wP 59138)
 - Frantisek Ondra, Ivan Rehák, Marek Vasko, DECOM, a.s.; Vladimir Necas, Slovak University of Technology (Slovakia)
- A-4. Uncertainty Analysis of Activity Measurement of New Monitoring System for Free-Release for NPP A-1 Decommissioning, Slovakia (wP 59244)

 Aloiz Slaninka, VUJE, a.s./ Slovak University of Technology in Bratislava; Ondrej Slávik,

VUJE. a.s.. (Slovakia)

- A-5. Laser Removal of Contaminants on the Metal Surface (wP 59343)

 Hui Jun Won, Jei Kwon Moon, Sun Hee Jung, Chong Hun Jung, Kune Woo Lee, Korea

 Atomic Energy Research Institute (Korea Republic)
- A-6. A Matrix Inversion Method For Gamma-Source Mapping From Gamma Count Data (wP 59082)

Richard Bull, Claire Burgess, Ian Adsley, Nuvia Limited (UK)

A-7. Influence of the Conditional Release of the Materials with Very Low Level of Radioactivity on the Environment (wP – 59132)

Slavka Prvakova, University of Economics in Bratislava; Adela Mrskova, DECOM, a.s.;

Jozef Pritrsky, DECOM; Vladimir Necas, Slovak University of Technology (Slovakia)

- A-8. Conditional Release of Steel from Decommissioning in a Form of Reinforced Concrete (wP 59058)
 - **Jozef Pritrsky**, DECOM; Miroslav Brodnan, University of Zilina; Vladimir Necas, Slovak University of Technology (Slovakia)
- A-9. Dismantling Waste Volume of Nuclear Power Plant and Radiation Dose Assessment Using 3D Shape (wP 59072)
 - Jongseon Jeon, Enesys Co., LTD.; HakSoo Kim, Nuclear Engineering & Technology Institute; Byoungsub Han, Enesys Co., LTD. (Korea Republic)
- A-10.Reuse of Conditionally Released Steels; Proposal and Evaluation of Processes for Manufacturing of Steel Elements and for Construction of Selected Scenarios (wP 59130)

Peter Bezák, Eva Hajková, Frantisek Ondra, Vladimír Daniska, DECOM, a.s.; Vladimir Necas, Slovak University of Technology (Slovakia)

- A-11.Decommissioning Activities for Salaspils Research Reactor (wP 59055)

 Andris Abramenkovs, Latvian Environment, Geology and Meteorology Centre; Jazeps

 Malnacs, State Environmental Service, Radiation Safety Centre (Latvia)
- A-12.Decommissioning of Irradiator Facility used for Research Purposes in Cuba (wP 59047)

Juan Carlos Benitez Navarro, Mercedes Salgado Mojena, CPHR; Evelio Soto Alvarez, Daniel Fraga Acosta, Yanet Rodríguez Perdomo, Marisleidys Llanes Rodríguez, CENSA (Cuba)

- A-13.Determining the Cost of Nuclear Technology Dismantling (w/oP 59362)

 Jan Petr, SURAO (RAWRA) (Czech Republic)
- A-14. The Assessment of the Waste Management Plan to Decommissioning of Cernavoda NPP for Environmental Impact Reduction (wP 59358)

 Gheorghe Barariu, National Authority for Nuclear Activity Subsidiary of Technology

and Engineering for Nuclear Project(Romania)

A-15. Bartlett's Lessons Learned in Using Decon Gel as a Strippable Decontamination Agent for Radioactive and Hazardous Contaminants (w/oP – 59364)

Gary Benda, Nick DiMascio, Butch Smith, Bartlett Services (USA)

SESSION 39-B

Wednesday: 8:30am - 5:45pm

POSTER SESSION: ENVIRONMENTAL REMEDIATION (ER) (4.1)

Co-Chairs: Lucien Pillette-Cousin, Areva (France)

Michel Dutzer, Andra, Chatenay-Malabry, (France)

Reviewer(s): Michel Dutzer and Lucien Pillette-Cousin

B-1. Radium Remediation in Canada - History and Present Day (w/oP – 59157)

Robert Zelmer, Mark J. Gardiner, Micheal Owen, AECL (Canada)

- B-2. Preparing For The Construction Phase of The Port Hope Area Initiative: Canada's Largest Low-Level Radioactive Waste Clean-up Project (wP 59307)

 Christine Fahey, Andrea Denby, Glenn Case, AECL; Tim Palmeter, Public Works
 Government Services Canada, (Canada)
- B-3. Techniques of Radioactive Soil Processing at Rehabilitation of Contamination Territories (wP 59199)

Victor Volkov, Alexander Chesnokov, Alexey Danilovich, Yury Zverkov, Sergey Koltvshev, Sergey Semenov, Anatoly Shisha, RRC Kurchatov Institute (Russia)

B-4. Optimization (Sampling Strategies and Analytical Procedures) for Site Specific Environment Monitoring at the Areas of Uranium Legacy Sites Contamination Concern in Ukraine (wP – 59045)

Oleg Voitsekhovych, Tatiyana Lavrova, Alexander Kostezh, Ukrainian Hydrometeorological Institute (Ukraine)

- B-5. Mathematical Modeling of Reactive Transport in Groundwater with Metals and Dissolved Isotopes 226Ra and 228Ra, USIN, São Paulo, Brazil (wP 59245)

 Rodrigo Raposo de Almeida, Federal Fluminense University; Valter J.G. Mortágua, Industrias Nucleares do Brasil; Felipe A. Rosa, Luciano D.F. Magalhaes, Universidade Federal Fluminens (Brazil)
- B-6. Post-Iodine Production NORM Repository Technical Design and Reconstruction
 Experience in Turkmenistan (wP 59183)

 Alexander Gelbutovsky, Peter Charemisin, Alexander Troshey, Alexander Egorov, Mil

Alexander Gelbutovsky, Peter Cheremisin, Alexander Troshev, Alexander Egorov, Mikhail Boriskin, **Mikhail Bogod**, ECOMET-S (Russia)

SESSION 39-C

Wednesday: 8:30am - 5:45pm

POSTER SESSION: MAJOR INSTITUTIONAL ISSUES IN ENVIRONMENTAL MANAGEMENT / PUBLIC INVOLVEMENT POSTERS (EM & CROSSCUTTING) (5.1)

Co-Chairs: Judy Connell, Fluor Government Group (USA)

Gerald Ouzounian, Andra (France)

Reviewer(s): Judy Connell and Gerald Ouzounian

C-1. Radioactive Waste, from Myth to Reality: The Stakes for Andra's Educational Communication Efforts (wP – 59287)

Annabelle Comte, Andra, (France)

SESSION 40

Wednesday: 1:45pm - 6:00pm

D&D MANAGEMENT APPROACHES AND PLANNING TOOLS (3.6)

Co-Chairs: Thierry Varet, Areva – BU Value (France)

Michiva Sasaki, Central Research Institute of Electric Power Industry

(Japan)

Organizer(s): Jas Devgun and Jean-Guy Nokhamzon

Reviewer(s): Thierry Varet and Michiya Sasaki

1. Implementation of the Standardized Listing into Decommissioning Costing; Examples and Related IAEA Projects (wP $-\,59313)$

Vladimír Daniska, DECOM, a.s. (Slovakia); Michele Laraia, Paul Dinner, Patrick O'Sullivan, IAEA. (Austria)

- 2. Development of Computer Program for Estimating Decommissioning Cost (wP 59037)
 - HakSoo Kim, JongKil Park, Nuclear Engineering & Technology Institute (Korea Republic)
- 3. A Practical Example of Reducing Technical Uncertainty in Decommissioning Projects (wP 59229)

Martin Bentley, Paul E Mort, Sellafield Ltd (UK)

4. Human and Organisational Factors as Key Levers of Performance in D&D Project Management (wP – 59323)

Thierry Flament, Areva NC; Bertrand Willmann, **Grégoire de Laval**, Jean-Louis Lemarchand, Alain Cordoba, Areva Nuclear Site Value Development BU (France)

-Break-

- 5. Use of Source Term and Air Dispersion Modeling in Planning Demolition of Highly Alpha-Contaminated Buildings (wP 59254)

 James G Droppo, Bruce A. Napier, Pacific Northwest National Laboratory (USA)
- 6. How And Integrated Change Programme Has Accelerated The Reduction In High Risk And High Hazard Nuclear Facilities at Sellafield (wP 59014)

 Angela Mackintosh. Sellafield Sites Ltd (UK)
- 7. Legacy Radioactive Waste Storage Magnox Swarf Storage Silo Liquor Effluent Management (wP 59271)

 Stephen Le Clere, Sellafield Ltd (UK)
- 8. Use of In-Situ Gamma Spectroscopy During Nuclear Power Plant Decommissioning (w/oP 59340)

Richard McGrath, Karen Kim, Electric Power Research Institute (USA)

9. Experience of Application of New Remote Controlled Instruments for Scanning of Distribution of Radioactive Contamination in Rooms with High Dose Rate (wP – 59354)

Oleg İvanov, Sergey Smirnov, Vyacheslav Stepanov, Alexey Danilovich, Victor Potapov, Anatoly Volkovich, NRC Kurchatov Institute (Russia)

SESSION 41

Wednesday: 1:45pm - 6:00pm

D&D TECHNOLOGIES - PART 2 OF 2 (3.13)

Co-Chairs: Jas Devgun, Sargent & Lundy (USA)

Bernard Vignau, CEA (France)

Organizer(s): Jas Devgun

Reviewer(s): Jas Devgun and Bernard Vignau

- 1. An Innovative Process For Segmenting Of Guide Tubes (w/oP 59029)

 Patrick PJ Gobert, Joseph Boucau, Westinghouse Electric Company (Belgium); Stefan Fallström, Westinghouse (Sweden)
- 2. Assay of Plutonium Contaminated Waste by Gamma Spectrometry (wP 59039)

 Ian Adsley, Michael Green, Ian Pearman, Nuvia Ltd; Mike Davies, Nuvia Limited (UK)
- 3. Reuse of Conditional Released Materials from Decommissioning; A Review of Approaches and Scenarios with Long-Term Constructions (wP 59149) Vladimír Daniska, DECOM, a.s.; Jozef Pritrsky, DECOM; Frantiaek Ondra, Ivan Rehák, DECOM, a.s.; Matej Zachar, DECOM, a.s.; Vladimir Necas, Slovak University of Technology (Slovakia)
- 4. Characterization of Iraq's Remote Nuclear Facilities for Decommissioning and Waste Management (wP 59167)

Fouad Al-Musawi, Adnan S. Jarjies, Ministry of Science and Technology (Iraq); Ross Miller, Sandia National Laboratories (USA)

-Break-

- 5. Remediation of a Ventilation Duct Contaminated by Pa-231 (wP 59248)

 Pete Burgess, Keith Stevens, Nuvia Ltd.; Clare Irving, Forest Environmental (UK)
- Measurement of Plutonium Contamination Through Paint Using a Fidler Probe (wP 59250)

Robert Clark, Nuvia Limited; Pete Burgess, Nuvia Ltd.; Ian Croudace, GAU-Radioanalytical Laboratories (UK)

7. The Use Of Standard Alpha And Beta Surface Scintillation Contamination Monitors to Confirm the Contamination Fingerprint and to Check on Source Quality (wP – 59249)

Pete Burgess, Nuvia Ltd (UK)

Technical Sessions — Page 61

8. Clearance of Buildings of NPP Würgassen (Germany) Using an Innovative Clearance Concept (wP - 59280)

Stefan Woerlen, Marco Steinbusch, Alexander Kummer, **Stefan Thierfeldt**, Brenk Systemplanung GmbH (Germany)

SESSION 42

Wednesday: 1:45pm - 6:00pm

LIQUID WASTE TREATMENT PROCESS AND EXPERIENCE (1.8)

Co-Chairs: Paul Haigh, The Paul Haigh Partnership (UK)

Michael Ojovan, University of Sheffield (UK)

Organizer(s)/Reviewers(s): Paul Haigh and Michael Ojovan

- 1. Nuclide Separation by Hydrothermal Treatment and Ion Exchange (wP 59217)

 Georg Braehler, Ronald Rieck, NUKEM Technologies (Germany); Sergej Shmatko,

 Ministry of Energy of Russian Federation; Valentin Avramenko, Valentin Sergienko,

 Valentin Dobrzhanskyi, Institute of Chemistry FEBRAS; Elmar Antonov, NTP (Russia)
- 2. Pre-Treatment of Organic Liquid Waste Stream at Cernavoda NPP (wP 59079)
 Gabriela Teodorov, MATEFIN (Romania); Dennis Kelley, Pacific Nuclear Solutions
 (USA)
- 3. A Fully Operational Pilot Plant for Eliminating Radioactive Oils Mixed with Chlorinated Solvents (wP 59044)

 Albert Jacobs. Dewdrops (France)
- 4. Transport and Deposition Properties of Model Slurries of One and Two Particle Species (wP 59140)

Hugh Rice, Bo Lin, Simon Biggs, Michael Fairweather, **James Young**, University of Leeds (UK)

-Break-

5. Decontamination of Strontium from Liquid Radioactive Wastes by Sodium Nonatitanate (wP – 59083)

Merceille Aurélie, CEA Marcoule; Agnès GRANDJEAN, Institut de Chimie Séparative de Marcoule; Yves BARRE, CEA Marcoule (France)

- 6. The Using of Ceramic Membrane Filters in the LRW Treatment Technologies at NPPs (w/oP 59187)

 Denis Fedorov, SUE SIA RADON (Russia)
- 7. Russia: Results and Prospects of Liquid Solidification Experiments at ROSATOM Sites (wP 59112)

Dennis Kelley, Pacific Nuclear Solutions (USA)

8. Adsorption of Cesium Radionuclides by the Composite Sorbents Carbon Fiber/Transition Metals Ferrocyanides (wP – 59255)

Wing Shandhay Venigmin Thelegrony Synthma Burthhaya Velerin Kungani I

Irina Sheveleva, Veniamin Zheleznov, **Svetlana Bratskaya**, Valeriy Kuryavyi, Valentin Avramenko, Institute of Chemistry FEBRAS (Russia)

SESSION 43

Wednesday: 1:45pm - 3:30pm

SITING, DESIGN, CONSTRUCTION, AND OPERATION OF L/ILW DISPOSAL

FACILITIES - PART 2 OF 2 (1.19)

Co-Chairs: Cathy Hickey, URS Corporation (USA)

Patricia Torres, Andra (France)

Organizer(s): Philip Rendell and Cathy Hickey

Reviewer(s): Cathy Hickey and Patricia Torres

1. Twenty Years of Operation for Centre de l'Aube Disposal Facili

1. Twenty Years of Operation for Centre de l'Aube Disposal Facility: Lessons Learned (wP – 59235)

Patrice Torres, Laurent Schacherer, Franck Duret, Pascal Lecoq, Alain Delaplanche, Michel Dutzer, Andra (France)

- 2. The Status of Demonstration Test for Underground Cavern-Type Disposal Facilities on Fiscal 2010 (wP 59180)
 - Yoshihiro Akiyama, Kenji Terada, Nobuaki Oda, Tsutomu Yada, Takahiro Nakajima, Radioactive Waste Management Funding and Research Center (Japan)
- 3. Demonstration of Gas Permeable Seals for Radioactive Waste Repositories Laboratory and In-Situ Experiments (wP 59224)

 Joerg Rueedi, Paul Marschall, Sven-Peter Teodori, Nagra (Switzerland)
- 4. Evolution for Improvements in the Chilean Radioactive Waste Management System (wP 59179)

Azucena Sanhueza-Mir, Commission Chilena Energia Nuclear (Chile)

SESSION 44

Wednesday: 4:15pm - 6:00pm

DISPOSAL SITE AND WASTE FORM CHARACTERIZATION AND

PERFORMANCE ASSESSMENT – PART 1 OF 2 (1.13)

Co-Chairs: Ed Bentz, EJ Bentz & Associates (USA)

Michel Dutzer, Andra (France)

Organizer(s): Ed Bentz and Donald Goebel Reviewer(s): Ed Bentz and Michel Dutzer

- Radiological Characterization of The Dutch Interim Waste Storage Facility Site (wP 59023)
 - Jeroen Welbergen, COVRA; Leo P.M. Velzen, Nuclear Research Group (Netherlands)
- 2. Climate Change Impacts on the Disposal Environment: A Climate Analogue Approach (wP 59274)

Bertrand Leterme, Dirk Mallants, SCK-CEN (Belgium)

- 3. Mineralogical Analyses of Old (78 and 98 years) Concrete (wP 59093)

 Tomoko Ishii, Hitoshi Owada, Radioactive Waste Management Funding and Research
 Center (Japan); Hiroyuki Sakamoto, Masahito Shibata, Kumi Negishi, Taiheyo Consultant
 Co., Ltd. (Japan)
- 4. Modeling of Alteration Behavior on Blended Cementitious Materials (wP 59096)

 Hitoshi Owada, Tomoko Ishii, Radioactive Waste Management Funding and Research
 Center; Mayumi Takazawa, Hiroyasu Kato, Mitsubishi Materials Corporation; Hiroyuki
 Sakamoto, Masahito Shibata, Taiheyo Consultant Co., Ltd., (Japan)

SESSION 45

Wednesday: 1:45pm - 3:30pm

REPOSITORY PROGRAMS: SITE SELECTION & CHARACTERIZATION, UNDERGROUND RESEARCH LABS, ENGINEERING & GEOLOGICAL BARRIERS - PART 2 OF 2 (2.7)

Co-Chairs: Bill Miller, AMEC (UK)

Johan Andersson, JA Streamflow AB (Sweden)

Organizer(s)/Reviewers(s): Bill Miller and Johan Andersson

- 1. Characterization Of The Anticipated Bentonite EBS Behaviour Immediately After Repository Closure In The Framework Of the PEBS (Long Term Performance of Engineered Barrier Systems) EURATOM Project (wP – 59288)
 - Irina Gaus, Nagra (Switzerland); Juan Carlos Mayor, ENRESA (Spain); Klaus Wieczorek, GRS (Germany); Michael Mente, BGR (Germany); Paul Marschall, Sven-Peter Teodori, NAGRA (Switzerland)
- 2. Performance Assessment Modeling for the Geological Siting Regions for the L/ILW And HLW Repositories in the Context of the Swiss Site Selection Plan (wP 59306) Andreas Poller, Jürg W. Schneider, Piet Zuidema, Nagra; Johannes Holocher, Gerhard Mayer, AF-Colenco AG (Switzerland)

Technical Sessions - Page 63

3. Investigations on the Minimum Distance Between a Spent Fuel/High-Level Waste and a Low/Intermediate-Level Waste Repository Due to Gas and Heat Generation (wP – 59220)

Rainer Senger, John Ewing, Intera Inc. Swiss Branch; Paul Marschall, Irina Gaus, NAGRA (Switzerland)

4. Hydraulic/Mechanical Modeling of Smectitic Materials for HMC Analytical Evaluation of the Long Term Performance of TRU Geological Repository (wP – 59090)

Ichizo Kobayashi, Kajima Corporation; Hitoshi Owada, Tomoko Ishii, Hitoshi Nakashima, Radioactive Waste Management Funding and Research Center (Japan)

5. A New Safety Concept for Geological Disposal in Japan (II) (wP – 59357)

Kazumi Kitayama, Nuclear Waste Management Organization of Japan (NUMO) (Japan)

SESSION 46

Wednesday: 4:15pm - 6:00pm

NATIONAL AND INTERNATIONAL PROGRAMS FOR SPENT FUEL, FISSILE, TRU, AND HLW MANAGEMENT (2.2)

Co-Chairs: Bernard Vigreux, Consultant (France)

Adrian Mendez-Torres, Savannah River National Lab (USA)

Organizer(s): Kanwar Raj and Hans Codee

Reviewer(s): Kanwar Raj and Bernard Vigreux

1. Implications of Co-existing National and Multinational Repository Development Programmes in Europe (wP $-\,59118)$

Neil A. Chapman, Charles McCombie, Arius Association (Switzerland); Ewoud Verhoef, Covra (Netherlands)

2. The UK Regulator's Perspective (wP-59353)

Ryan Maitland, Unit 2G Nuclear Installations Inspectorate (UK)

3. Establishment of Research and Development Priorities Regarding the Geologic Disposal of Nuclear Waste in the USA and Strategies for International Collaboration (wP - 59168)

Mark Nutt, Mark Peters, Argonne National Laboratory; Peter Swift, Kevin McMahon, Sandia National Laboratories; Jeff Williams, U.S. DOE (USA)

4. The Cigéo Geological Repository Project (wP – 59265)

Thibaud Labalette, Alain Harman, Marie-Claude Dupuis, Andra (France)

SESSION 47

Wednesday: 1:45pm - 3:30pm

RADIUM REMEDIATION - HISTORICAL PERSPECTIVES AND CURRENT CIRCUMSTANCES - PART 2 OF 3 (4.14)

Co-Chairs: Robert Zelmer, Atomic Energie of Canada Limited (Canada)

Gerald Ouzounian, Andra (France)

Organizer(s)/Reviewers(s): Robert Zelmer and Gerald Ouzounian

1. Port Radium Start to Finish Life Cycle A Case Study on Canada's Historic Radium/Uranium Mine, Initial Operation and Closure, Concerns of the Aboriginal Déline People, Subsequent Assessments, Remediation (wP – 59332)

Gerd Wiatzka, SENES Consultants Ltd (Canada)

2. Challenges in Developing a Remediation Plan, Procurement Plan and Long Term Monitoring Program for the Former Port Radium Uranium Mine that Meets the Needs of the Community of Déline (w/oP – 59333)

Julie Ward, Indian and Northern Affairs Canada (Canada)

SESSION 48

Wednesday: 4:15pm - 6:00pm

PANEL: RADIUM REMEDIATION - HISTORICAL PERSPECTIVES AND CURRENT CIRCUMSTANCES – PART 3 OF 3 (4.13)

Co-Chairs: Robert Zelmer, Atomic Energie of Canada Limited (Canada)

Gerald Ouzounian, Andra (France)

Organizer(s): Robert Zelmer and Gerald Ouzounian

An international panel will discuss and compare progress and history of national radium remediation programs. Lessons learned will be featured and shared. The outlook for the final closure on this issue worldwide will also be addressed. The perspectives and panelists invited include those from practitioners in government policy leadership, regulatory oversight and licensing, health and safety impacts and protection, environmental remediation practice and affected community stakeholders.

Panelists include: **Jean-Luc Lachaume**, ASN, France; **Gerd Wiatzka**, SENES, Canada; Representative from Canadian Nuclear (invited); Representative from USA; and a Representative from Belgium (TBD)

SESSION 49

Wednesday: 1:45pm - 3:30pm

PANEL: COMMUNICATIONS AND KNOWLEDGE MANAGEMENT - PART 1 OF 2 (5.21)

Co-Chairs: Jim Marra, US DOE (USA)

Ian Seed, Cogentus Consulting Limited (UK)

Organizer(s): Jim Marra

This is a two part series on communications and knowledge management. Current efforts and views will be presented during this first session. This session is directly followed by the second part, Panel Session #50. Presenters will each provide a 10-15 minute overview to the audience before the break, and will then resume on this topic. Presenters include: Laurie Judd, NuVision Engineering; Leonel Lagos, Florida International University; Yanko Yanev, IAEA; Andra (Representative invited); JAEA (Representative invited); and Fluor Corporation (Representative invited).

SESSION 50

Wednesday: 4:15pm - 6:00pm

PANEL: COMMUNICATIONS AND KNOWLEDGE MANAGEMENT - PART 2 OF 2 (5.19)

Co-Chairs: Jim Marra, US DOE (USA)

Ian Seed, Cogentus Consulting Limited (UK)

Organizer(s): Jim Marra

This panel will provide strategies and lessons learned regarding general communications and knowledge management to a wide variety of target audiences, and discuss the earlier presentations. Communication and management of technical information is a challenging endeavor. Target groups for technical communications range from the general public with a cursory knowledge of the subject matter to highly technical personnel heavily engaged in the work scope. Communications to the general republic requires deft wording of technical content and use of attention-grabbing graphics and illustrations. Managing technical content for highly technical personnel requires thorough cataloging of subject matter and providing easy recall and use Presenters include: Laurie Judd, NuVision Engineering; Leonel Lagos, Florida International University; Yanko Yanev, IAEA; Andra (Representative invited); JAEA (Representative invited); and Fluor Corporation (Representative invited)

SESSION 51

Thursday: 8:30am - 12:30pm

SAFETY CONSIDERATIONS ASSOCIATED WITH L/ILW MANAGEMENT (1.14)

Co-Chairs: Stephen Wickham, Galson Sciences Limited (UK)

Ian Crossland, Crossland Consulting (UK)

Organizer(s)/Reviewers(s): Stephen Wickham and Ian Crossland

1. UK LLWR Environmental Safety Case Submission 2011 (wP - 59135)

Richard Cummings, John Shevelan, LLWR Ltd, Cumbria; Andrew Baker, Eden Nuclear and Environment Ltd.; Trevor Summerling, Safety Assessment Management Ltd.; Amy Huntington, LLWR Ltd. (UK)

2. An Assessment of The Radiological Impact Of Coastal Erosion Of The UK Low-Level Waste Repository (wP - 59137)

Trevor Summerling, Safety Assessment Management Ltd.; Richard Cummings, **John Shevelan**, LLWR Ltd. (UK)

3. Development of a Methodology for Determining ILW Package Monitoring and Inspection Requirements (wP – 59156)

Jenny E. Morris, Timothy W. Hicks, Stephen M. Wickham, Galson Sciences Limited; Antonio Guida, Colette Hunt, Babcock International Group; James McKinney, Nuclear Decommissioning Authority; W. Mark Tearle, Magnox Limited, (UK)

4. Mitigation of Sliding Motion of a Cask-Canister by Fluid-structure Interaction in an Annular Region (wP - 59208)

Tomohiro Ito, Atsuhiko Shintani, Chihiro Nakagawa, Osaka Prefecture University (Japan)

—Break—

5. Different Types of Radioactive Waste Repositories, Each Suited for a Given Type of Radioactive Waste (wP - 59293)

Sylvie Voinis, Fabrice Boissier, Lise Griffault, Jean Louis Maillard, Andra (France)

 Indicators of Disposal System Safety, Performance and Functioning Applied to a Near-Surface Repository (wP – 59301)
 Dirk Mallants, Janez Perko, SCK.CEN (Belgium)

7. Identification of Factors Affecting the Longevity of Interim ILW Stores and Techniques Supporting Store Life Extension (wP – 59151)

Jenny Morris, Stephen M. Wickham, Timothy W. Hicks, Phil J. Richardson, Galson Sciences Limited; James McKinney, Nuclear Decommissioning Authority; W. Mark Tearle, Magnox Limited, Berkeley (UK)

8. Regulations, Policy and Strategies for Low Level Radioactive Waste Management in Bangladesh (wP – 59009)

Abdus S Mollah, Bangladesh Atomic Energy Commission (Bangladesh)

9. An Assessment of the Radiological Impact of Human Intrusion at the UK Low Level Waste Repository (LLWR) (wP - 59356)

Timothy W. Hicks, Tamara D. Baldwin, Galson Sciences Limited, Richard Cummings, LLWR Ltd; Trevor Summerling, Safety Assessment Management Ltd. (UK)

SESSION 52

Thursday: 8:30am - 12:30pm

DISPOSAL SITE AND WASTE FORM CHARACTERIZATION AND

PERFORMANCE ASSESSMENT - PART 2 OF 2 (1.20)

Co-Chairs: Donald Goebel, SEC (USA)

Patricia Torres, Andra (France)

Organizer(s): Donald Goebel

Reviewer(s): Donald Goebel and Patricia Torres

1. Substitution of the Product Consistency Test (PCT) and Vapor Hydration Test (VHT) for Glass Durability (wP – 59022)

Albert Kruger, US DOE WTP Engineering Division (USA)

2. Reaction of Bentonite in Low-Alkali Cement Leachates: Preliminary Results from the Cyprus Natural Analogue Project (wP – 59223)

W Russell Alexander, Bedrock Geosciences (Switzerland); Antoni E. Milodowski, British Geological Survey(UK); Costas A. Constantinou, Michael Rigas, Cyprus Geological Survey (Cyprus); Cherry Tweed, NDA-RWMD (UK); Patrik Sellin, SKB (Sweden); Petri Korkeakoski, Posiva Oy (Finland); Ignasi Puigdomenech, SKB (Sweden)

3. Characterization of the Geology of the UK Low Level Waste Repository (wP – 59146)

John Shevelan, LLWR Ltd,; Nicholas Smith, National Nuclear Laboratory (UK)

4. In-Situ Interferometric Measurements of Compacted Smectite Under Hyperalkaline Condition (wP - 59124)

Hisao Satoh, Susumu Kurosawa, Mitsubishi Materials Corporation; Tomoko Ishii, Hitoshi Owada, Radioactive Waste Management Funding and Research Center(Japan)
—**Break**—

5. A Process-Based Radionuclide Migration Model for Large-Scale Concrete Structures Accounting for Long-Term Physical-Chemical Parameter Evolution (wP – 59297)

Janez Perko, Dirk Mallants, Diederik Jacques, SCK.CEN (Belgium)

6. Biogeochemical Modelling of the Chemical Evolution of the Near Field of the UK LLW Repository and Effects on Carbon-14 Release (wP – 59150)

Joe Small, Christopher P. Lennon, Liam Abrahamsen, UK National Nuclear Laboratory; Andrew J. Baker, Low Level Waste Repository Ltd., (UK)

7. Characterization and Assessment of the Groundwater Pathway for the Low Level Waste Repository, UK (wP – 59098)

Lee Hartley, Martin James, Peter Jackson, Matt Couch, Serco (UK)

SESSION 53

Thursday: 8:30am - 10:15am

GLOBAL PARTNERSHIPS AND NATIONAL INITATIVES IN ENVIRONMENTAL MANAGEMENT - PART 1 OF 2 (5.13)

Co-Chairs: Michael Cull, Teledyne (USA)

Mark Gerchikov, AMEC (Canada)
Organizer(s)/Reviewer(s): Michael Cull and Mark Gerchikov

 The Global Partnership: its Achievements, Missed Opportunities and Potential to Address Future Threats from the Spread of CBRN Materials and Expertise (wP – 59335)

Alan Heyes, Wyn Bowen, Hugh Chalmers, King's College, London (UK)

2. Russian Nuclear Submarine Elimination 2001 - 2011 by The International Community (w/oP - 59041)

Michael J. Washer, Foreign Affairs and International Trade Canada (Canada); Alan Heyes, King's College (UK)

SESSION 54

Thursday: 10:45am - 12:30pm

PANEL: GLOBAL PARTNERSHIPS AND NATIONAL INITATIVES IN ENVIRONMENTAL MANAGEMENT - PART 2 OF 2 (5.20)

Co-Chairs: Michael Cull, Teledyne (USA)

Mark Gerchikov, AMEC (Canada)

Organizer(s)/Reviewer(s): Michael Cull and Mark Gerchikov

1. The Global Threat Reduction Initiative's Radiological Security Cooperation with Russia (wP – 59361)

Tiffany Blanchard, US DOE; William Abramson, Lawrence Livermore National Laboratory; James W. (J.R.) Russell, National Security Technologies; Catherine Roberts, Pacific Northwest National Laboratory (USA)

Technical Sessions — Page 67

2. Environmental and Radiological Remediation Under Canada's Global Partnership Program 2004-11 (wP - 59185)

Michael J. Washer, Foreign Affairs and International Trade Canada (Canada)

- 3. Environmental Surveillance System for the Shchuchye Site (wP 59042) Stephane Belbeze, Mathieu Hallouin, ANTEA (France)
- 4. UK Contributions to the Decommissioning of the BN-350 Reactor in Kazakhstan: 2002-2011 (wP 59099)

Steven Laws, Department of Energy and Climate Change (UK), **David Wells** and Andrew Herrick, Nuvia Limited (UK)

With the remaining time, a panel will provide a global perspective on the status of the clean-up of nuclear legacy sites in the North West and Far East Russia and lessons learned by key participants of the Global Partnership Program. The speakers will discuss best practice in international cooperation, meeting regulatory requirements and approaches to ensure safe management of spent nuclear fuel and radioactive waste. Speakers in this session will discuss their Global Partnership activities, and explore opportunities for future international collaboration.

SESSION 55

Thursday: 8:30am - 10:15am

SAFETY AND SECURITY RELATED TO ENVIRONMENTAL AND NUCLEAR MATERIALS MANAGEMENT (5.11)

Co-Chairs: Natraj Iyer, SRNL (USA)

Philippe Crochon, Areva (France)

Organizer(s): Adrian Mendez-Torres

Reviewer(s): Adrian Mendez-Torres and Philippe Crochon

1. Enhancing the Safety Performance of US DOE's Environmental Management Operations (w/oP - 59228)

Chuan-Fu Wu, Terry Krietz, US. DOE (USA)

2. Remote Radiation and Visual Surveys of the Hot Cell Waste Vault and Spent Fuel Transfer Route at Kazakhstan's BN-350 Reactor (wP – 59101)

David Wells, Andrew Herrick, Nuvia Limited (UK), Alexander Klepikov, Nuclear

Technology Safety Center (Republic of Kazakhstan), Collin Knight, Idaho National Laboratory (USA)

Laboratory (USA)

3. The Desirability of MOX Fuel to Potential Proliferators (wP – 59215)

Adrian Mendez Torres, Sean Branney, Nicholas Gallucci, Savannah River National Laboratory (USA)

SESSION 56

Thursday: 10:45am - 12:30pm

ADVANCED L/ILW TECHNOLOGIES - PART 2 OF 2 (1.21)

Co-Chairs: Pierre Van Iseghem, SCK-CEN (Belgium)

Dominique Greneche, Consultant (France)

Organizer(s): Angie Jones

Reviewer(s): Pierre Van Iseghem and Dominique Greneche

- 1. New Trends in L/ILW Cementation (wP 59290)

 Florence Bart, Christophe Joussot-Dubien, CE (France)
- 2. Lifetime Performance of ASME AG-1 Section FK Radial Flow Filters (wP 59170)

 Charles Waggoner, Michael Parsons, Paxton Giffen, Mississippi State University (USA)
- 3. Applying Fluid Dynamics Simulations to Improve Processing and Remediation of Nuclear Waste (wP 59172)

Kelly J Knight, Jon M. Berkoe, Brigette M. Rosendall, L. Joel Peltier, Bechtel National, Inc. (USA)

4. Advanced Drying System to Meet Radiolysis Criteria of Metallic Waste (wP – 59116)

Masamichi Obata, Yasushi Ooishi, Toshiba Corporation (Japan)

5. Alternative Strategies to Reduce Cost and Waste Volume in HEPA Filtration Using Metallic Filter Media (wP - 59348)

Chris Chadwick, Porvair Filtration Group (UK)

SESSION 57

Thursday: 8:30am - 12:30pm

RECENT ADVANCES IN PROCESSING AND IMMOBILIZATION OF HLW, FISSILE AND TRU - PART 2 OF 2 (2.6)

Co-Chairs: James Blankenhorn, West Valley Environmental Services-URS (USA)

Gerald Ouziunianm, Andra (France)

Organizer(s): Mark Denton and Bill Wilmarth

Reviewer(s): James Blankenhorn and Gerald Ouziunianm

- 1. Observations of the Environmental Management Experts Group (wP 59352) Wolfgang Runde, Los Alamos National Laboratory; Anibal Taboas, Consultant (USA)
- 2. Iodine Conditioning as Iodate Ion in an Apatite-Like Ceramic (w/oP 59015)

 Lionel Campayo, CEA; Danielle Laurencin, Institut Charles Gerhardt de Montpellier;

 Agnès Grandjean, Institut de Chimie Séparative de Marcoule; Remy Delorme, CEA

 (France)
- 3. The Development, Testing and Demonstration of a New Class of Inorganic Ion Specific Media Emphasizing the Optimization, Stabilization and Volume Reduction of the Final Nuclear Waste Form (wP 59126)

Mark Denton, Kurion Inc.; William D. Bostick, MCL, Inc. (USA)

4. Cold Crucible Vitrification of High-Na/Al HLW Surrogate and Characterization of Borosilicate Glasses (wP $-\,59239)$

Sergey Stefanovsky, Michael Beliy, Sergey Shvetsov, Dmitry Suntsov, Alexandra Sorokaletova, Galina Malinina, SIA Radon (Russia)

-Break-

- 5. Status of the Development of In-Tank/At-Tank Separations Technologies for High-Level Waste Processing for the U.S. DOE (wP 59109)

 Bill Wilmarth, Savannah River National Laboratory; Nicholas P. Machara, US DOE Office of Technology Innovation and Deployment; Steve P. Schneider, US DOE Office of Waste Processing; Reid A. Peterson, Pacific Northwest National Laboratory (USA)
- 6. Separation Processes for the Pretreatment of High-Level Nuclear Wastes at the Savannah River Site (wP 59291)

 David Hobbs, Thomas Peters, Kathryn Taylor-Pashow, Fernando Fondeur, Charles Nash, Samuel Fink, David Herman, Savannah River National Laboratory (USA)
- 7. The Design, Development and Demonstration of a New Modular Vitrification System (MVS®) for the Treatment of Nuclear Waste (wP 59127)

 Mark Denton. Gaetan Bonhomme, Kurion Inc. (USA)
- 8. Structural Features of Vitrified High-Na/Al/Fe Waste (wP 59240)
 Sergey Stefanovsky, SIA Radon (Russia); Jim Marra, U.S. DOE; Kevin Fox, Savannah
 River National Laboratory (USA)

SESSION 58

Thursday: 8:30am - 12:30pm

D&D RADIOLOGICAL CHARACTERIZATION AND MONITORING (3.5)

Co-Chairs: Maria Lindberg, Studsvik Nuclear AB (Sweden)
Jean-Guy Nokhamzon, CEA/DEN/DADN (France)

Organizer(s)/Reviewers(s): Jas S. Devgun and Jean-Guy Nokhamzon

- 1. Quantifying Tc-99 Contamination in a Fuel Fabrication Plant (wP 59024)

 Pete Burgess, Nuvia Ltd; Carol Darbyshire, Springfield Fuels Ltd. (UK)
- 2. Effect of Non-Uniform Distribution of Natural Radionuclides on Clearance Measurements of Concrete Scraps (wP 59091)

 Michiya Sasaki, Haruyuki Ogino, Takeshi Ichiji, Takatoshi Hattori, Central Research Institute of Electric Power Industry (Japan)

3. Discrimination Monitors for Various Kinds of Waste to be Down Graded (wP – 59117)

Susumu Naito, Syuji Yamamoto, Mikio Izumi, **Masamichi Obata**, Yukio Yoshimura, Jiro Sakurai, Hitoshi Sakai, Toshiba Corporation (Japan)

4. The Science, Assaying and Waste Sentencing of Activated Bioshields (wP – 59038)

Ian Adsley, Nuvia Ltd (UK)

–Break-

- 5. Waste Assessment: A Practical Approach to Proving Waste Metals Suitable for Consignment as Radiologically Exempt Materials (wP 59266)

 Iain Carvel, RSRL; Richard D Gunn, Robin Strange, Christopher Orr, Babcock International Group (UK)
- 6. Gamma-Ray Imaging for Generating 3D Dose Rate Maps (wP 59123)

 Karl Hughes, Edmund Cracknell, Babcock International Group (UK)
- Development of a Computer System for Support and Documentation of Clearance of Buildings of Nuclear Installations (wP – 59278)
 Christoph Winkler, Stefan Woerlen, Stefan Thierfeldt, Brenk Systemplanung GmbH
- 8. Geostatistical Methodology for Waste Optimization of Contaminated Premises (wP 59344)

Yvon Desnoyers, GEOVARIANCES; Didier Dubot, CEA/FAR/USLT/SPRE/SAS (France)

9. Sampling vs. Taking Some (wP – 59349)

Dominique François-Bongarcon, AGORATEK International Consultants (USA)

SESSION 59

Thursday: 8:30am - 12:30pm

(Germany)

RISK/PERFORMANCE ASSESSMENTS AND CONTAMINANT MIGRATION (4.7)

Co-Chairs: Gerd Wiatzka, SENES Consultants Ltd (Canada)

Didier Dubot, CEA/FAR/USLT/SPRE/SAS (France)

Organizer(s): Steve Brown and Didier Dubot Reviewer(s): Gerd Wiatzka and Didier Dubot

- 1. Uncertainties on the Extension of a Polluted Zone (wP 59198)

 Chantal de Fouquet, Mines ParisTech Ecole des mines de Paris (France)
- 2. Identification and Implementation of End-User Needs During Development of a State-of-the-Art Modeling Toolset (wP 59069)

 Roger Seitz, Savannah River National Laboratory; Mark Freshley, Pacific Northwest National Lab; Susan Hubbard, Lawrence Berkeley National Lab; Mark Williamson, US DOE, Office of Environmental Management; Paul Dixon, Los Alamos National Laboratory; Kurt Gerdes, DOE EM; Yvette Collazo Reyes, USA DOE (USA)
- 3. Uranium Investigation in an Alluvial Aquifer with Direct Push Methods (w/oP 59281)

Fabian De Weirdt, Geoprobe Environmental Technologies s.a. (Belgium)

4. Remediation Project Planning at the Uranium Production Legacy Sites. Lesson Learned from the Best International Practice and Challenges for Developing Countries (wP – 59043)

Oleg Voitsekhovych, Ukrainian Hydrometeorological Institute (Ukraine)

–Break-

- Independent Technical Reviews for Groundwater and Soil Remediation Projects at US DOE Sites (wP – 59188)
 Dawn Kaback, AMEC (USA)
- 6. A Physiochemical Analysis of the Mechanisms for Transport and Retention of Technetium (Tc-99) in Unsaturated Soils (wP 59050)

 Danielle P Jansik, Dawn Wellman, Elsa Cordova, DeNomy Dage, Pacific Northwest National Laboratory; Dorthe Wildenschild, Oregon State University (USA)
- 7. Ideal Gas Flows Through Micro Channels: Revisited (wP 59338) Franz Durst, FMP TECHNOLOGY GMBH (Germany)
- 8. Cost Benefit Assessment According to French Methodology (wP 59310) Pricop-Bass Tudor, URS (France)

9. Intermediate and Long-Term Radiological Consequences of Uncontrolled Saline Solution Access into Asse Mine (wP – 59163)

Veronika Ustohalova, Christian Küppers, Öko-Institut e.V. (Germany)

SESSION 60

Thursday: 8:30am - 12:00pm

BEST POSTERS OF ICEM2011 (6.1)

Co-Chairs: Anibal Taboas, Consultant (USA)

Dominique Greneche, Consultant (France)

Organizer(s): Gary Benda

This poster session highlights the top posters selected from each of the five Tracks of ICEM2011.

Technical Program Organizers

INTERNATIONAL ADVISORY ORGANIZERS

Technical Program Co-Chair(s)

Gary Benda, Bartlett Services, Inc. (USA)

Dominique Grenêche, Consultant (FRANCE)

TECHNICAL PROGRAM ORGANIZERS

Track 1 - Low/Intermediate-Level (L/ILW) Radioactive Waste Management

Angie Jones, *AMEC Earth & Environmental (USA)*

Michel Dutzer, Andra (FRANCE)

Jerome Brueziere, CEA (FRANCE)

Marc Butez, CEA (FRANCE)

Christopher Joussot-Dubien , *CEA (FRANCE)*

<u>Track 2 - Spent Fuel, Fissile Material, Transuranic (TRU) and High-Level</u> Radioactive Waste (HLW) Management

Heather Klebba, Nuclear Filter Technology (USA)

Gerald Ouzounian, *Andra (FRANCE)*

<u>Track 3 - Facility Decontamination and Decommissioning (D&D)</u>

Jas Devgun, Sargent & Lundy (USA)

Jean-Guy Nokhamzon, CEA (FRANCE)

Thierry Varet, AREVA – BU Value (FRANCE)

Track 4 - Environmental Remediation (ER)

Steve Brown, SHB Consultants (USA)

Didier Dubot, CEA (FRANCE)

Sandrine Magdaliniuk, AREVA (FRANCE)

Jean-Guy Nokhamzon, CEA/DEN/DADN (FRANCE)

<u>Track 5 - Environmental Management (EM)/Public Involvement/Crosscutting</u> <u>Issues/Global Partnering</u>

Judith (Judy) Connell, Fluor (USA)

Regis Dalmas, EDF (FRANCE)

Yvette Collazo, US DOE (USA)

Ana Han, US DOE (USA)

Jim Marra, US DOE (USA)

Gerald Ouzounian, Andra (FRANCE)

Jean-Guy Nokhamzon, CEA/DEN/DADN (FRANCE)

We thank you for your commitment, time and support of ICEM'11

Session Organizers

Keith Anderson, ECC (USA)

Johan Andersson, JA Streamflow AB (Sweden)

Ian Beadle, AMEC (UK)

Ed Bentz, EJ Bentz & Associates (USA)

James Blankenhorn, URS (USA)

Hans Codee, Corva (Netherlands)

Ian Crossland, Crossland Consulting (UK)

Michael Cull, Teledyne (USA)

Didier Delmont, CEA (France)

Mark Denton, Kurion Inc. (USA)

Kapila Fernando, ANSTO (Australia)

Irina Gaus, Nagra, (Switzerland)

Mark Gerchikov, AMEC (Canada)

Donald Goebel, SEC (USA)

Jeffrey Griffin, SRNL (USA)

Paul Haigh, The Paul Haigh Partnership (UK)

Cathy Hickey, URS Corporation (USA)

Jean-Michel Hoorelbeke, Andra (France)

Natraj Iyer, SRNL (USA)

Ronald Keyser, ORTEC - AMETEK (USA)

John Mathieson, NDA, (UK)

Adrian Mendez-Torres, SRNL (USA)

Bill Miller, AMEC (UK)

Horst Monken Fernandes, IAEA, (Austria)

Karan North, Magnox Ltd (UK)

Michael Ojovan, University of Sheffield (UK)

Peter Ormai, IAEA (Austria)

Corhyn Parr, Nuclear Enterprises (USA)

Kanwar Raj, Bhabha Atomic Research Center (India)

Philip Rendell, NDA (UK)

Hans Riotte, OECD/NEA (France)

Roger Seitz, SRNL (USA)

Anibal Taboas, ASME (USA)

Patricia Torres, Andra (France)

Leo Van Velzen, NRG (Netherlands)

Thierry Varet, AREVA (France)

Bill Wilmarth, SRNL (USA)

David Wallace, CDM (USA)

Stephen Wickham, Galson Sciences Limited (UK)

Robert Zelmer, Atomic Energie of Canada Limited (Canada)

Conference Steering Committee

General Co-Chairs

Anibal Taboas, Consultant Dominique Grenêche, Consultant

Conference Manager

Gary Benda, Bartlett Services

ICEM Project Director(s)

Vince Dilworth, ASME

European Event Manager

Bernard Jolly, French Nuclear Energy Society (SFEN)

Technical Paper Submission; Abstracts, Bio's, Copyright, Drafts and/or Final Papers

Stacey Cooper, ASME Shari Brabham, CISS Corporation

US Program Coordinator for the Technical Program, Non-Eu Conference Registration or Non-European Union Vendor Exhibition

Shari Brabham, CISS Corporation

EU Coordinator for Reims, France and Other Local Aspects, Conference Facilities, Social Programs, Vendor Arrangements, European Union (EU) Vendor Exhibition or EU Conference Registrations

Sylvie Delaplace, French Nuclear Energy Society (SFEN)

Technical Tours

Sylvie Delaplace, French Nuclear Energy Society (SFEN)

US Federal Liaison(s)

Yvette Collazo, US Department of Energy Larry Camper US Nuclear Regulatory Commission

EU Liaison(s)

Bernard Jolly, French Nuclear Energy Society (SFEN)

IAEA Liaison

Irena Mele, IAEA, Division of Nuclear Fuel Cycle and Waste Technology

ASME ICEM'11 Conference Committee Liaisons

Vincent Dilworth, ASME International Anibal Taboas, Consultant, Environmental Engineering Division Ken Kok, Consultant, Nuclear Engineering Division

French Nuclear Energy Society (SFEN)

Bernard Jolly, French Nuclear Energy Society (SFEN)

Disclaimer: Neither ASME or Société Française d'Energie Nucléaire (SFEN) can accept any liability for death, injury, or any loss, cost or expense suffered or incurred by any person if such loss is caused or results from the act, default or omission of any person other than an employee or agent of ASME or Société Française d'Energie Nucléaire (SFEN). In particular, neither ASME nor Société Française d'Energie Nucléaire (SFEN), can accept any liability for losses arising from the provision or non-provision of services provided by hotel companies or transport operators. Nor can ASME or Société Française d'Energie Nucléaire (SFEN) accept liability for losses suffered by reason of war including interest of war, not and civil strife, terrorist activity, natural disaster, weather, flood, drought, technical, mechanical or electrical breakdown within any premises visited by delegates and/or partners in connection with the conference, industrial disputes, governmental action, regulations or technical problems which may affect the services provided in connection with the conference. Neither ASME nor Société Française d'Energie Nucléaire (SFEN) is able to give any warranty that a particular person will appear as a speaker or panelist.

Tentative Schedule of Events

*	PTEMBER 25, 2011 - TEN	
Event	Time	Location
Exhibitor Set up	Hours pre-assigned	RCC - Exhibition Hall, 1st Floor
Registration	4:00 - 7:00pm	RCC - 1st Floor
Author/Panelist/Co-Chair Check-in Golf Tournament	4:00 - 7:00pm	RCC - 1st Floor
	7:30am - 3:00pm	Le Golf de Reims Champagne RCC - 1st Floor
Welcome Reception	6:00 - 7:30pm	
	PTEMBER 26, 2011 - TE	
Event	Time	Location
Registration	7:15am - 6:00pm	RCC - 1st Floor
Speakers Briefing	7:30 - 8.00am	RCC - 1st Floor
Exhibitor Set up	8:00 - 11:00am	RCC - Exhibition Hall, 1st Floor
Author/Panelist/Co-Chair Check-in	8:00am - 6:00pm	RCC - 1st Floor
Speakers Ready Area	7:15am - 5:00pm	RCC - 2nd Floor
Welcome Reception	6:00 - 7:30pm	RCC - 1st Floor
Exhibition Open	12:00 - 6:00pm	RCC - Exhibition Hall, 1st Floor
Coffee Service - Pre Opening Session	8:00 - 9:30am	RCC - Exhibition Hall, 1st Floor
Monday Morning Opening Session	9:00am - 12:30pm	RCC - 2nd Floor
Poster Session	8:30am - 5:45pm	RCC - 1st Floor
Coffee Break	10:30 - 11:00am	RCC - 1st Floor
Lunch	12:30 - 1:40pm	RCC - Exhibition Hall, 1st Floor
Sessions	1:45 - 6:00pm	RCC - 2nd Floor
Coffee Break	3:30 - 4:10pm	RCC - Exhibition Hall
TUESDAY, SE	PTEMBER 27, 2011- TE	ENTATIVE
Event	Time	Location
Registration	7:15am - 6:00pm	RCC - 1st Floor
Speakers Briefing	7:30 - 8.00am	RCC - 1st Floor
Speakers Ready Area	7:15am - 5:00pm	RCC - 1st Floor
Author/Panelist/Co-Chair Check-in	8:00am - 6:00pm	RCC - 1st Floor
Exhibit Hall Hours	8:30am - 7:30pm	RCC - Exhibition Hall, 1st Floor
Sessions	8:30am - 12:30pm	RCC - 2nd Floor
Poster Session	8:30am - 5:45pm	RCC - 1st Floor
Coffee Break	10:15 - 10:40am	RCC - Exhibition Hall, 1st Floor
Lunch	12:30 - 1:40pm	RCC - Exhibition Hall, 1st Floor
Sessions	1:45 - 6:00pm	RCC - 2nd Floor
Coffee Break	3:30 - 4:10pm	RCC - Exhibition Hall, 1st Floor
Tuesday Reception	6:00 - 7:30pm	RCC - Exhibition Hall, 1st Floor
•	SEPTEMBER 28, 2011 - '	
Event	Time	Location
Registration	7:15am - 6:00pm	RCC - 1st Floor
Speakers Briefing	7:30 - 8.00am	RCC - 1st Floor
Speakers Ready Area	7:15am - 5:00pm	RCC - 2nd Floor
Author/Panelist/Co-Chair Check-in	8:00am - 6:00pm	RCC - 1st Floor
Exhibit Hall Hours	8:00am - 4:30pm	RCC - Exhibition Hall, 1st Floor
Sessions	8:30am - 12:30pm	RCC - 2nd Floor
Poster Session	8:30am - 5:45pm	RCC - 1st Floor
Coffee Break	8:30am - 5:45pm 10:15 - 10:40am	RCC - Exhibition Hall, 1st Floor
Coffee Break Lunch	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor
Coffee Break Lunch Sessions	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor
Coffee Break Lunch Sessions Coffee Break	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor
Coffee Break Lunch Sessions	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SE	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SI Event	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SE Event Registration	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm EPTEMBER 29, 2011 - T <i>Time</i> 7:15am - 12:30pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location RCC - 1st Floor
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SI Event Registration Speakers Ready Area	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm EPTEMBER 29, 2011 - T Time 7:15am - 12:30pm 7:15am - 12:30pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location RCC - 1st Floor RCC - 2nd Floor
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SE Event Registration Speakers Ready Area Speakers Briefing	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm EPTEMBER 29, 2011 - T Time 7:15am - 12:30pm 7:15am - 12:30pm 7:30 - 8.00am	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location RCC - 1st Floor RCC - 2nd Floor RCC - 1st Floor
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SE Event Registration Speakers Ready Area Speakers Briefing Author/Panelist/Co-Chair Check-in	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm EPTEMBER 29, 2011 - T Time 7:15am - 12:30pm 7:15am - 12:30pm 7:30 - 8.00am 8:00am - 1:00pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location RCC - 1st Floor RCC - 2nd Floor RCC - 1st Floor RCC - 1st Floor RCC - 1st Floor
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SI Event Registration Speakers Ready Area Speakers Briefing Author/Panelist/Co-Chair Check-in Sessions	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm EPTEMBER 29, 2011 - T Time 7:15am - 12:30pm 7:15am - 12:30pm 7:30 - 8.00am 8:00am - 1:00pm 8:30am - 12:30pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location RCC - 1st Floor RCC - 2nd Floor RCC - 1st Floor RCC - 1st Floor RCC - 2nd Floor RCC - 2nd Floor
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SI Event Registration Speakers Ready Area Speakers Briefing Author/Panelist/Co-Chair Check-in Sessions Poster Session	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm EPTEMBER 29, 2011 - T Time 7:15am - 12:30pm 7:15am - 12:30pm 7:30 - 8.00am 8:00am - 1:00pm 8:30am - 12:30pm 8:30am - 12:30pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location RCC - 1st Floor RCC - 2nd Floor RCC - 1st Floor RCC - 2nd Floor RCC - 2nd Floor RCC - 1st Floor RCC - 1st Floor RCC - 1st Floor RCC - 1st Floor
Coffee Break Lunch Sessions Coffee Break Wednesday Banquet THURSDAY, SI Event Registration Speakers Ready Area Speakers Briefing Author/Panelist/Co-Chair Check-in Sessions	8:30am - 5:45pm 10:15 - 10:40am 12:30 - 1:40pm 1:45 - 6:00pm 3:30 - 4:10pm 7:00 - 11:00pm EPTEMBER 29, 2011 - T Time 7:15am - 12:30pm 7:15am - 12:30pm 7:30 - 8.00am 8:00am - 1:00pm 8:30am - 12:30pm	RCC - Exhibition Hall, 1st Floor RCC - Exhibition Hall, 1st Floor RCC - 2nd Floor RCC - Exhibition Hall, 1st Floor Champagne De Castelnau Caveau ENTATIVE Location RCC - 1st Floor RCC - 2nd Floor RCC - 1st Floor RCC - 1st Floor RCC - 2nd Floor RCC - 2nd Floor

ICEM'11 c/o CISS Corporation P.O. Box 57296 Tucson, AZ 85732-7296 USA