



**EUROPEAN FEDERATION OF CORROSION  
EUROPÄISCHE FÖDERATION KORROSION  
FÉDÉRATION EUROPÉENNE DE LA CORROSION**

**MINUTES OF THE WP4 FALL MEETINGS  
HELD IN THE CONGRESS CENTER OF WORLD TRADE CENTER, MOSCOW, RUSSIA  
WEDNESDAY, SEPTEMBER 15<sup>TH</sup>, 2010**



**AND IN THE PALAIS DES PAPES, AVIGNON, FRANCE (during "Fontevraud 7")  
WEDNESDAY, SEPTEMBER 29<sup>TH</sup>, 2010**



**Written by:**

Damien Féron and Catherine Guerre

**Diffusion:**

Present and apologized participants

Juliet Ippolito (EFC Scientific Secretary and Public Relation Officer)

Ines Honndorf (EFC Website)

**EFC WP4 "NUCLEAR CORROSION"**

Chairman	Damien Féron	CEA/Saclay	DEN/DANS/DPC/SCCME	Bât. 458 - PC 50	F-91191 GIF SUR YVETTE Cedex
Vice-Chairman	Thierry Couvant	EDF	DMMC - Les Renardières	BP46	F-77818 MORET SUR LOING Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/DANS/DPC/SCCME	Bât. 458 - PC 50	F-91191 GIF SUR YVETTE Cedex



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**Attendance to the Moscow meeting:**

Mathias Breimesser	PSI, Switzerland
Bob Cottis	Manchester University, United Kingdom
Nicolas Dulcy	Vallourec, France
Damien Féron	CEA, France
James Grosvenor	Rolls-Royce, United Kingdom
Hans Hoffmeister	Helmut Schmidt University, Germany
Vivekanand Kain	BARC, India
Alison Weightman	Rolls-Royce, United Kingdom
Krzysztof Wolski	ENSM-SE, France

**Attendance to the Avignon meeting:**

Thierry Couvant	EDF, France
Willem Geerinck	LABORELEC, Belgium
Catherine Guerre	CEA, France
Emmanuel Herms	CEA, France
Stefan Ritter	PSI, Switzerland
Johan Stiamsater	Studsvik, Sweden

**Apologies for absence received from:**

Rik-Wouter Bosch	SCK-CEN, Belgium
Ulla Ehrnsten	VTT, Finland
Miroslava Ernestova	NRI Rez, Czech Republic
Dolores Gomez Briceño	CIEMAT, Spain
Bruno Kursten	SCK-CEN, Belgium
Marc Le Calvar	IRSN (France)
Christina Lilja	SKB, Sweden
Valérie L'Hostis	CEA, France
Stuart Lyon	Manchester University, United Kingdom
Anders Molander	Studsvik, Sweden
Cristiano Padovani	Nuclear Decommissioning Authority, United Kingdom
Hans-Peter Seifert	PSI, Switzerland
David R. Tice	SERCO, United Kingdom
Marc Vankeerberghen	SCK-CEN, Belgium

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**Enclosures:**

\* Document available only on the private space of the EFC WP4 website, for WP4 Members

- ✓ Annex I: Agenda of the Moscow meeting
- ✓ Annex II: Agenda of the Avignon meeting
- ✓ Annex III: Slides presented at the Moscow meeting\*
- ✓ Annex IV: Slides presented at the Avignon meeting\*

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## 1. OPENING AND APPROVAL OF THE AGENDA

D. Féron in Moscow and Th. Couvant in Avignon opened the meeting and thanked the audience for coming. Agenda was presented and approved, as no comments were made.

## 2. APPROVAL OF THE MINUTES OF THE NICE MEETING

During the Moscow meeting, D. Féron made a review of the previous WP4 Fall meeting in Nice during EUROCORR'2009. These minutes are approved.

## 3. PRESENTATION OF THE NEW 3-YEAR PLAN

Objectives of the next 3-year plan (2011-13) are presented and are the following:

- ✓ providing links between European teams and EU funded programs in nuclear corrosion field, with an opening on to the world;
- ✓ initiating and stimulating opportunities of exchanges on scientific & technical subjects related to nuclear corrosion, particularly on today main nuclear research areas: waste systems, water reactors, generation IV and fusion reactors;
- ✓ promoting corrosion science and technical developments by events such as seminars, workshops, publications, etc.

The following actions are described to reach the objectives:

- ✓ Two WP meetings each year
  - \* Spring meeting (more focus on one or few items)
  - \* Annual general meeting during EUROCORRs
- ✓ Specific seminars/workshops
  - \* During EUROCORRs
  - \* In connection with EU programs
  - \* On specific subjects
- ✓ Re-activation of the task forces (groups)
- ✓ Webpage: active and attractive
- ✓ Publications: In EFC series (one book per year) and Journals
- ✓ Development of links between EFC WP4 and nuclear organisations (Euratom, OECD/NEA, UN/AIEA)
- ✓ Summer School "nuclear corrosion"

Some actions have been underlined as efforts have to be made to progress; they included: relations with Euratom and EU funded programs, re-activation of task groups and the Summer School.

Discussion is raised during the Avignon meeting on the Summer School. It is proposed to link it with the PERFORM program. As this idea has been several times evocated, it becomes urgent to meet the Organising Committee.

During the Moscow meeting, the 3-year plan has been formally approved.

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## 4. EFC WP4 PUBLICATIONS

Two books have been published since the last WP4 Fall meeting:

- ✓ EFC #56: "Corrosion monitoring in nuclear systems: research and applications"  
Editors: Stefan Ritter & Anders Molander  
255 pages - Published June 2010
- ✓ "Long Term Performance of Cementitious Barriers and Reinforced Concrete in Nuclear Power Plants and Waste Management" - EFC event 317  
RILEM editions book (PRO 64, ISBN: 978-2-31158-072-1)  
343 pages - October 2009

Several books are under preparation:

- ✓ EFC #59: "Sulphur Assisted Corrosion in nuclear disposal systems"  
Editors: Bruno Kursten & Rik-Wouter Bosch  
Planned at the beginning of 2011
- ✓ Green book "Corrosion issues in future high temperature nuclear systems"  
EUROCORR'2009 Workshop - WP4 & WP3
- ✓ Green book "50 years of stress corrosion cracking of nickel based alloys"  
From the presentations made at the "Jubilee day" on January 26<sup>th</sup>, 2010
- ✓ A special issue in the International Journal Corrosion Engineering Science and Technology (former British corrosion Journal): "Proceedings of the 4<sup>th</sup> International Workshop on Long Term Prediction"  
Special issue planned in 2011
- ✓ Materials & Corrosion/Journal de physique 4  
Under discussions for the proceedings of the "Ageing Management of Nuclear Structures and Installations" held in November 2010  
Special issue planned in 2011
- ✓ International Workshop on "Coupling mechanisms to improve lifetime prediction of LWRs"  
EDF-MAI publication

## 5. EFC WP4 FUTURE EVENTS

The year 2010 is particularly rich in WP4 events as 3 have been already held:

- ✓ Jubilee day: Stress Corrosion Cracking of nickel base alloys at CEA - Coriou effect/50 ans de corrosion sous contrainte au CEA - Effet Coriou  
January 26, 2010 at CEA/Saclay - 130 participants
- ✓ International workshop on "Coupling mechanisms to improve lifetime prediction of LWRs"  
EFC event 331  
8-9 April 2010, Les Renardières (France), EDF (Material Ageing Institute) -50 participants
- ✓ 4<sup>th</sup> International Workshop on "Prediction of Long Term Corrosion Behaviour in Nuclear Waste Systems"  
EFC event 329  
28 June - 2 July 2010, Bruges, Belgium, SCK-CEN - 65 participants

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And another event is planned next autumn:

- ✓ International workshop "Ageing Management of Nuclear Structures and Installations"  
EFC event 334 (with AECL and RILEM)  
November 8-13, 2010, Toronto, Canada

Two events are planned during 2011:

- ✓ 7<sup>th</sup> annual meeting of the ECG-COMON  
June 20-21, 2011, Finland
- ✓ 2<sup>nd</sup> Int. Workshop on "Corrosion Monitoring in Nuclear Systems (Research and Applications)"  
Special WS during EUROCORR 2011  
September 5-8, 2011, Stockholm, Sweden  
Organised by Stefan Ritter and Anders Molander in collaboration with the ECG-COMON  
(deadline for abstracts: 31 January 2011)

Dr. Eng. Asano Hidekazu, Radioactive Waste Management Funding and Research Center Pacific Marks, Tsukishima, Japan proposes by E-mail to organise the 5<sup>th</sup> International Workshop on "Prediction of Long Term Corrosion Behaviour in Nuclear Waste Systems (LongTermCor2013)". After a short discussion, the principle of this workshop in Japan is accepted during the Moscow meeting.

## 6. EFC WP4 WEBSITE

The WP 4 website is described and shown. It is updated frequently thanks to Stefan Ritter. The audience is encouraged to pass by from time to time and/or feel free to send events or any other useful information to [stefan.ritter@psi.ch](mailto:stefan.ritter@psi.ch).

The address is: [http://www.efcweb.org/Working\\_Parties-p-104085/WP\\_4.html](http://www.efcweb.org/Working_Parties-p-104085/WP_4.html).

A restricted area (for members only) has been added to the WP 4 website. The password will be provided only to members.

Damien Féron and Thierry Couvant expressed their thanks to Stefan Ritter for taking care of the WP4 website.

## 7. EUROCORRs

Next EUROCORRs are listed. The subject of the special workshop has to be decided for EUROCORR'2012

- ✓ EUROCORR'2011, 5-8 September, Stockholm, Sweden  
Workshop "Corrosion monitoring in nuclear systems" (S. Ritter - ECG-COMON)
- ✓ EUROCORR'2012, 9-13 September, Istanbul, Turkey
- ✓ EUROCORR'2013, 1-4 September, Lisbon, Portugal

## 8. MISSING ITEMS, CONCLUSION AND CLOSURE

A short discussion has been raised during the Avignon meeting on the attractiveness of the WP4 Spring meeting and how to increase the attendance of these meetings. A proposal is made for holding the Spring meeting in connection with the ECC-COMON meeting (June 2011).

The next Fall meeting of the EFC WP4 will be in Stockholm during EUROCORR'2011.

The meetings are closed as no other points were raised.

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**Enclosure 1:**

- ✓ Annex I: Agenda of the Moscow meeting

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## Fall meeting of the Nuclear Corrosion Working Party (EFC WP4)

Wednesday, 15 September 2010 (16h15-19h30)

Congress Center of World Trade Center Moscow (WTC), Room 4  
Krasnopresnnskaya nab., 12  
123610 MOSCOW, RUSSIA

(Information are given on the Eurocorr website <http://www.eurocorr.org/EUROCORN+2010.html> )

The proposed agenda is the following:

1. Opening and Approval of the agenda
2. Approval of the minutes of the Nice 2009 fall meeting
3. EFC WP4 internal matters
  - Short presentation of the EFC WP4
  - Proposal of a new 3 years plan (2011-2013)
4. EFC WP4 Publications
  - Books & special issues already published
  - Future publications in EFC Series
  - "Nuclear corrosion" books in other series
  - Publications in Journals and Special issues
5. EFC WP4 past events (2010)
6. EFC WP4 future events
7. EFC WP4 website
8. EUROCORR's
9. Missing items
10. Closure





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**Enclosure 2:**

- ✓ Annex II: Agenda of the Avignon meeting

**EFC WP4 "NUCLEAR CORROSION"**

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## **Second fall meeting of the Nuclear Corrosion Working Party (EFC WP4)**

Wednesday, 29 September 2010 (17h30-19h30)  
"salle du Cubiculaire", the Popes Palace, Avignon, France

The proposed agenda is the following:

1. Opening and Approval of the agenda
2. EFC WP4 internal matters
  - Short presentation of the EFC WP4
  - Proposal of a new 3 years plan (2011-2013)
3. EFC WP4 Publications
  - Books & special issues already published
  - Future publications
4. EFC WP4 events
5. EFC WP4 website
6. EUROCORR's
7. Missing items
8. Closure



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**Enclosure 3:**

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- ✓ Annex III: Slides presented at the Moscow meeting

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**Enclosure 4:**

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- ✓ Annex IV: Slides presented at the Avignon meeting

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