

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

**MINUTES OF THE WP4 FALL MEETING
HELD IN THE KONZERTHAUS FREIBURG, FREIBURG IM BREISGAU (GERMANY)
SEPTEMBER 10TH AND 11TH, 2007**

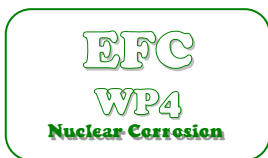


Diffusion:

Present and apologized participants
WP4 Members
P. MacIntyre (EFC Scientific Secretary)
Ph. Berge (EFC General Secretary in France)
G. Kreysa (General Secretary in Germany)

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

Attendance on Monday, September 10th, 2007:

Mylène Belgome	CEA/Saclay (France)
Rik-Wouter Bosch	SCK-CEN (Belgium)
Neil Fairweather	Serco (UK)
Damien Féron	CEA/Saclay (France)
Renate Kilian	AREVA-NP GmbH (Germany)
Bruno Kursten	SCK-CEN (Belgium)
Valérie L'Hostis	CEA/Saclay (France)
Anders Molander	Studsvik Nuclear AB (Sweden)
Juha Piippo	Cormet (Finland)
Stefan Ritter	Paul Scherrer Institute (Switzerland)
Ian Woolsey	Consultant for British Energy Generation Ltd (UK)
Wenzhong Zhang	Serco (UK)

Attendance on Tuesday, September 11th, 2007:

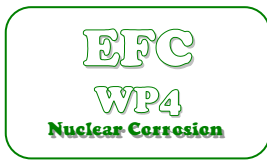
Mylène Belgome	CEA/Saclay (France)
Peter Bennett	OECA Halden Reactor Project (Norway)
Rik-Wouter Bosch	SCK-CEN (Belgium)
Robert Cottis	University of Manchester (UK)
Damien Féron	CEA/Saclay (France)
Heike Glasbrenner	HSK (Switzerland)
Outi Hyökyvirta	VTT (Finland)
Zsolt Kerner	MTA KFKI Atomic Energy Research Institute (Hungary)
Renate Kilian	AREVA-NP GmbH (Germany)
Bruno Kursten	SCK-CEN (Belgium)
Valérie L'Hostis	CEA/Saclay (France)
Pierre Laghoutaris	CEA/Saclay (France)
Andraž Legat	Slovenian National Building and Civil Engineering Institute (Slovenia)
Stuart Lyon	University of Manchester (UK)
Frantz Martin	CEA/Saclay (France)
Anders Molander	Studsvik Nuclear AB (Sweden)
Stefan Ritter	Paul Scherrer Institute (Switzerland)
Ian Woolsey	Consultant for British Energy Generation Ltd (UK)

Apologies for absence received from:

Franck Druyts	SCK-CEN (Belgium)
Catherine Guerre	CEA/Saclay (France)
Marc Le Calvar	IRSN (France)
Jan Macak	Institute of Chemical Technology (Czech Republic)
Radek Novotny	JRC (The Netherlands)
Antoine Pourbaix	CEBELCOR (Belgium)
Bo Rosborg	KTH (Sweden)
Steven Van Dyck	SCK-CEN (Belgium)
Marc Vankeerberghen	SCK-CEN (Belgium)
Börje Wegemar	Westinghouse Electric Sweden AB (Sweden)

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

Summary:

1. Opening and welcome	4
2. Approval of the agenda	4
3. Approval of the minutes of the Maastricht Meeting	4
4. Status of EFC WP4 publications	5
5. EFC WP4 groups	7
6. EFC WP4 website	9
7. EFC WP4 past events	10
8. EFC WP4 Future events	11
9. EUROCORRs	14
10. EFC WP4 specific matters	16
11. Closure	17

Enclosures:

- ✓ Slides presented by D. Féron: Freiburg - WP4 Fall Meeting (DF)
- ✓ Slides presented by R.W. Bosch: Freiburg - ECG-COMON (RWB)
- ✓ Slides presented by B. Kursten: Freiburg - SACNUC 2008 (BK)
- ✓ Slides presented by V. L'Hostis : Freiburg - NUCPERF 2009 (VLH)
- ✓ Slides presented by B. Kursten: Freiburg - Computer modelling in corrosion (BK)

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

1. OPENING AND WELCOME

D. Féron opened the meeting at 16.15 and thanked the audience for coming.

Before presenting the agenda, he apologized for splitting this Fall Meeting in two parts and for having cancelled the Spring Meeting that was supposed to be held in June in Magdeburg in conjunction with the ECG-COMON Meeting.

Then, he presented the apologies for absence received.

2. APPROVAL OF THE AGENDA

D. Féron presented the agenda:

- ✓ The first part (September 10th, 2007), is mainly related to what has been done since the last Fall Meeting.
- ✓ The second part (September 11th, 2007), will present the future activities of the WP4 and some news about the EFC.

No comment is made; the agenda is approved by the participants.

3. APPROVAL OF THE MINUTES OF THE MAASTRICHT MEETING

D. Féron made a review of the minutes of the previous WP4 Fall Meeting held in Maastricht on September 26th, 2006.

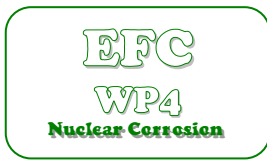
He recalled some major points:

- ✓ O. de Bouvier is in charge of the EFC WP4 website where news and presentations about the WP4 "mirror groups" are welcome; these groups are invited to contact O. de Bouvier for any request about additions/up-dates to the WP4 website.
- ✓ A short review of the past EUROCORRs and of the NUCPERF' 2006 conference was made.
- ✓ The problems in EFC Series publications were underlined.
- ✓ The new WP4 3-years plan was presented and submitted to members for a decision during the next Meeting.

No comment is made; the minutes of the Maastricht Meeting are approved and the Secretary is acknowledged for writing these minutes.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

4. STATUS OF EFC WP4 PUBLICATIONS

4.1. Books already published and under publication: EFC Series Green Books

Three Green Books have been published in 2007 and recalled their content while showing the layout and some information about each book in his slides:

- ✓ **EFC Series #48:** "Corrosion of metallic heritage artefacts: investigation, conservation and prediction for long term behaviour"
Editors: Ph. Dillmann, H. Mathiessen, P. Piccardo, G. Béranger.
This book, which is the first Green Book on the subject, gathers 20 papers. It was sent to P. MacIntyre by mid-June 2005 and published in March 2007.
- ✓ **EFC Series #49:** "Electrochemistry in Light Water Reactors: Reference Electrodes, Measurements, Corrosion and Tribocorrosion Issues"
Editors: R.W. Bosh, J.P. Celis and D. Féron.
This book gathers 11 papers. It was sent to P. MacIntyre by mid-October 2005 and published in May 2007.
- ✓ **EFC Series #51:** "Corrosion Issues in Light Water Reactors: Stress Corrosion Cracking"
Editors: D. Féron and J.M. Olive.
This book gathers 26 papers. It was sent to P. MacIntyre by the end of November 2005 and published in June 2007.

D. Féron recalled that a 30% discount is granted to EFC members on EFC Series Green Books.

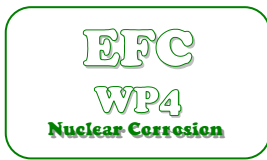
4.2. Books already published and under publication: other publications

D. Féron then presented other publications made or about to be made:

- ✓ **Proceedings of NUCCPERF'2006** conference
These proceedings were published, after reviewing, as a special edition of the "Journal de Physique IV". D. Féron thanked V. L'Hostis for managing this reviewing and publication quite soon since the conference was held by the end of March 2006 and the proceedings published in November 2006. He recalled that it was planned to publish these proceedings as a Green Book, but due to the edition problems of the EFC at that time, it was decided to publish them in another way. He took the occasion to recall that organisers of EFC events are not obliged to publish the proceedings of their events as EFC Series Green Books. Moreover, publishing proceedings in other editions can be a way to reach people that are not aware of WP4 (or even EFC) activities, and so, can be a good publicity for disseminating our presentations/work.
- ✓ Publications in the **Journal of Nuclear Materials**
D. Féron first recalled the agreement with the board of editors of JNM (January 2006) to publish the "best" papers presented during EUROCORRs WP4 sessions.
For the moment:
 - * 03 papers presented during EUROCORR'2005 have been published;
 - * 06 papers presented during EUROCORR'2006 (08 papers were selected but 02 were cancelled since they had already been published) are about to be published, waiting for the last return from one reviewer to be sent to JNM.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

Moreover, D. Féron recalled that it is also agreed by JNM to publish the proceedings of workshops sponsored by the WP4 as extra editions of JNM, the WP4 being "guest editor" and the edition rules of JNM applied to the papers. For example:

- * A special issue will be published, gathering papers presented during the 3rd International Workshop on Prediction of long term corrosion behaviour in nuclear waste systems (PennState University, USA, May 14th-18th, 2007). For the moment, the agreement of the US authorities are awaited, but the papers should be sent to reviewing by the end of September.

D. Féron also evoked a big problem encountered for almost every publication: the delay in papers selection, in the return from authors and reviewers... These delays make that the edition of the papers comes too long after the event occurs. That is why he asks for an involvement of the organisers in the publication/edition process and proposes that the organisers of this EUROCORR'2007 WP4 workshops take in charge the publication of their best papers. As nobody objected, this proposal is approved.

4.3. Future publications

In the past 3-years plan, it was established to publish one Green Book per year. Due to the edition problems of the EFC, three Green Books were finally published in 2007, so we can say that the contract is fulfilled! Moreover, the proceedings of the NUCPERF'2006 conference were edited as a special issue of Journal de Physique IV, and the proceedings of the 2nd International Workshop Prediction of long term corrosion behaviour in nuclear waste systems were published by ANDRA.

Regarding the papers to be published, D. Féron recalled that papers presenting achieved studies are the ones to be selected.

The future publications planned are:

- ✓ Papers presented during EUROCORRs sessions, in JNM.
- ✓ A special issue of JNM for the proceedings of the 3rd International Workshop on Prediction of long term corrosion behaviour in nuclear waste systems.
- ✓ The papers of the ECG-COMON workshop (plus additional ones), as a Green Book.

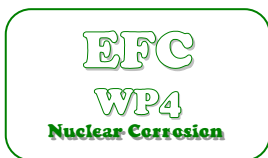
Regarding the future EFC Series publications, D. Féron recalled that:

- ✓ The publication of the proceedings of workshops concluding European programmes (like it was done by the end of the LIRES programme) as EFC Series Green Books is very valuable to disseminate the knowledge acquired and for our visibility to EU Officers. D. Féron asked the audience to think and speak about this opportunity in European meetings.
- ✓ Other publications can be proposed, for instance on critical subjects in the field of the WP4 activities, subjects on which a kind of overview can be needed or useful.

R.W. Bosch asked which publication is the best, in EFC Series or in JNM? D. Féron answered that both are valuable since publishing EFC Series Green Books is a way of funding the EFC (10% of the price of the Green Book is devolved to EFC) and a way of visibility in Europe, and more and more also in the USA. But, publishing papers/special issues in other editions is an interesting way to reach people not involved and aware of EFC activities. That is why both kinds of editions are to be used.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

5. EFC WP4 GROUPS

5.1. European Cooperative Group on Corrosion Monitoring of Nuclear Materials (ECG-COMON)

R.W. Bosch, who is the new Chairman of this group, presented the up-date of the ECG-COMON current status, reminding:

- ✓ The acronym signification of ECG-COMON.
- ✓ Its field of interest, more focused on electrochemical noise monitoring.
- ✓ The objectives of the group.
- ✓ Its organisation, the meeting being organised as informal workshops to exchange freely information and ideas.
- ✓ Its current members, recalling that the group is open to new members, submitted to the approval of present members since the information exchanged are submitted to a confidentiality agreement.

Then, he summarized the ECG-COMON 3rd annual meeting held in Magdeburg (Germany) in last June. This meeting was successful and very interesting and gathered 20 participants from 15 member organisations and a new member. 15 presentations were made and 03 discussion sessions carried out. The main points were:

- ✓ The evaluation of the 2nd Round Robin Test on electrochemical noise that lead to establish some guidelines for noise measurements.
- ✓ The planning of a 3rd Round Robin Test on electrochemical noise.

R.W. Bosch concluded with the announcement of the 4th annual meeting of the ECG-COMON, that will take place on June 16-17th, 2008 in Villigen (Switzerland) and with the announcement of a small Fall Meeting that will take place on September 11th, just after the 2nd part of the WP4 Fall Meeting.

He also reminded the e-mail addresses of the contacts of ECG-COMON Chairman (himself, chairman@ecg-comon.org) and Vice-Chairman (St. Ritter, vice-chair@ecg-comon.org), as well as the website address (www.ecg-comon.org), if anyone is interesting in getting information/joining the group.

5.2. European Expert Group on Corrosion of Internals in LWRs (EEG-CILWR)

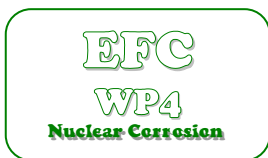
As R. Novotny apologized for absence, no representative can give information about the activity of this group.

5.3. European Expert Group on Corrosion in Nuclear Waste Systems (EEG-CNWS)

This group was involved in the organisation of the 3rd International Workshop on Prediction of long term corrosion behaviour in nuclear waste systems in PennState University and maybe other workshop will come later. But, as no representative was attending the Meeting, no more information about the activity of this group could be given.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

5.4. Summer School "Nuclear Corrosion"

It was proposed during the Maastricht Fall Meeting to have a Summer School on Nuclear Corrosion for one week, maybe in 2009, and even to organise this Summer School during one week each year or every two years, in different countries.

He proposed to create a new task force and asked if R.W. Bosch who showed some interest in organising this event is still interested. RW. Bosch answered that, for the moment, SCK-CEN is in charge of a Summer School within the PERFECT programme and will ask to go on with a Nuclear Corrosion Summer School when the PERFECT programme comes to its end and so its Summer School.

Regarding the funding of this Summer School, D. Féron informed that either the event is organised by the EFC and so funded by the companies of the organisers, or, depending on the subject funds can be asked from EURATOM.

D. Féron informed that, having organised one Summer School, that represents a lot of work for a single edition, and that it could be more interesting to make it a regular event.

D. Féron insisted on the point that some subjects would need this kind of manifestation, invited the audience to get involved, and concluded saying that this Summer School will be the main point of the next WP4 Spring Meeting where discussion will be carried out and the final decision should be made.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

6. EFC WP4 WEBSITE

D. Féron recalled what is now on the WP4 page, on the EFC website (www.efcweb.com):

- ✓ Minutes of the WP4 meetings (without overheads).
- ✓ Reports on WP4 activities and presentation of the WP4 at OCDE/NEA (made in Cadarache, in 2006)
- ✓ WP4 groups: ECG-COMON
- ✓ Announcements of future events/workshops of the WP4
- ✓ WP4 publications in EFC series and others, not up-to-date for the moment.

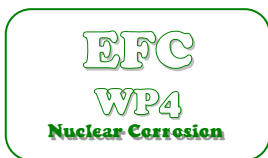
Then, he recalled what has to be done:

- ✓ It was evoked to create a protected page with password where the list of WP4 members and the slides presented during WP4 Meetings could be put; but, as it seems not so easy to do, D. Féron proposed either to put on the actual page the list of WP4 members with only their postal addresses (no phone number or e-mail address), or to leave the page as it is now, knowing that the list of the WP4 members can be required to the WP4 Secretary. As nobody reacted, it was decided to leave the page as it is.
- ✓ A description of the WP4 history and task group should be put on the website, as it has been done for the ECG-COMON group.

As a conclusion, D. Féron recalled that O. de Bouvier, who apologised for absence, is in charge of the WP4 website and invited the audience to contact her for any question or request (odile.debouvier@edf.fr).

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

7. EFC WP4 PAST EVENTS

7.1. Topical day "10 years of SCC at SCK-CEN"

D. Féron recalled that this meeting, organised by SCK-CEN, occurred in Belgium last January 22nd and was very successful and well-done. He took the opportunity to recall that, even if it is not an EFC event, WP4 members should not hesitate to ask him to announce this kind of "private" event (to all the WP4 members and on the WP4 website).

7.2. 3rd International Workshop on Prediction of long term corrosion behaviour in nuclear waste systems

This Workshop was held in PennState University (USA) on May 14th-18th, 2007 and was the first event occurring out of Europe to get an EFC event (#301). It was sponsored both by the EFC and OECD/NEA.

Meanwhile there were "only" 35 participants, those who are influent in the field of interest were participating, which lead to very good and interesting exchanges around the 33 presentations, in a "good atmosphere".

The proceedings will be published as a special issue of JNM with the following deadlines:

- ✓ Papers sent by the authors by the end of September.
- ✓ Reviewing by the end of November.
- ✓ Corrections by authors and approvals by December.
- ✓ Papers sent to the publisher by January 2008.
- ✓ Publication before May 2008.

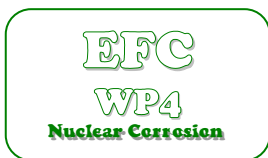
To conclude, D. Féron announced that the 4th International Workshop is planned in 2010 in Belgium, and we hope that this event will get again the sponsorship of OECD/NEA.

CLOSURE OF THE FIRST PART OF THE WP4 FALL MEETING

D. Féron apologised again for splitting the Fall Meeting in two parts, thanked the attendance and closed the meeting at 17.10, recalling the second part will take place tomorrow, at 17.00, just after the end of the WP4 session.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

OPENING AND WELCOME OF THE SECOND PART OF THE WP4 FALL MEETING

D. Féron opened the second part of the WP4 Fall Meeting at 17.00 and thanked the audience for coming. Back to the agenda, D. Féron recalled that the first part of the Meeting was mainly regarding the past of the WP4 and the second part will deal with the future of the WP4 activities.

8. EFC WP4 FUTURE EVENTS

D. Féron announced the future events sponsored by the WP4 and invited the organisers to say a few words about them.

8.1. Symposium on sulfur influenced corrosion (SACNUC 2008)

B. Kursten announced that this symposium organised by SCK-CEN which is the EFC event #311, will take place in Brussels (Belgium) on October 21st-23rd, 2008.

He reminded the growing importance of sulfur in the corrosion process (for instance, the case of the Belgian supercontainer is evoked) and explained that the aim of the symposium is to gather scientists, to create a state-of-the-art of the knowledge on sulfur assisted corrosion, receiving inputs from outside the nuclear waste topic and carry on discussions based on the presentations made.

The main topics are:

- ✓ Geochemistry
- ✓ Microbiology
- ✓ Localized corrosion
- ✓ Effects of γ -irradiation
- ✓ Modelling
- ✓ Lifetime prediction

Then, he exposed the main points of the symposium:

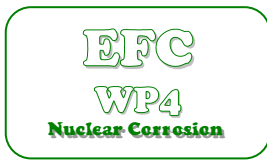
- ✓ The proceedings will be published as a Green Book.
- ✓ The Organising Committee is composed of SCK-CEN, NIRAS/ONDRAF (the waste disposal governmental authority) and sponsored by EFC WP4.
- ✓ A Scientific Committee will be composed of himself, R. Gens (NIRAS/ONDRAF), D. Féron (CEA/Saclay), D.D. Macdonald (PennState University) and N. Smart (Serco Assurance)
- ✓ The e-mail address for any information/to propose oral presentation: sacnuc@sckcen.be.
- ✓ The website, now under construction, will be available by the end of September.

B. Kursten precised that the scope of the symposium covers every effect of sulfur influenced corrosion and not only corrosion by SBR effects.

D. Féron thanked the orator and advised to send the announcement not only to WP4 but also to the WP "Gas and oil" who is also facing problems with sulfur/sulfate effects.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

8.2. Workshop on Corrosion and Long Term Performance of Concrete in Nuclear Power Plants and Waste Facilities (NUCPERF 2009)

V. L'Hostis presented a short review of the NUCPERF 2006 Workshop that was organized by the CEA and EDF, with the support of the EFC, specially the WP4, and the OECD/NEA, and that took place in Cadarache (France) on March 27-30th, 2006.

Then, she explained that a 2nd NUCPERF will be organised within a new context since a special Technical Committee of the RILEM society has just been created in this aim:

- ✓ The name of the TC is "Reinforced concrete in the context of nuclear waste management".
- ✓ It is planned for a duration of 2 to 3 years.
- ✓ The Chairlady is V. L'Hostis and the Secretary is Robert Gens (ONDRAF).

V. L'Hostis presented the technical areas of the conference (see slides for details) and the technical environment which is a follow-on to the activities of the sponsoring organisations (EFC, specially WP4, OECD/NEA and IAEA).

NUCPERF'2009 will be organised in Cadarache (France) at Spring 2009 and the topic is "Corrosion and long term performance of reinforced concrete in nuclear power plants and waste facilities". The proceedings will be edited by RILEM and selected papers will be published in JNM. Moreover, the RILEM will publish a state-of-the-art report on actual R&D programs on the field of long-term durability of reinforced structures used in nuclear facilities.

Then she presented the Technical Committee and concluded with the future work to be achieved: find a date for the conference, in accordance with RILEM and EFC, and get an EFC event number. More information should be given during next EFC WP4 Spring Meeting.

Answering a question, V. L'Hostis precised that the 2nd NUCPERF will be focused on long-term performance of concrete in NPP and waste facilities, and not only on reinforced concrete. That is also to note that, as an AEN sponsored event, some recommendations are made after the workshop, which is very interesting and useful.

D. Féron thanked the orator and underlined the importance and interest in organising workshops with the sponsorship of other organisations than EFC since it helps improving the visibility of these events

8.3. 4th International Workshop on Prediction of long term corrosion behaviour in nuclear waste systems

Introduced by D. Féron, B. Kursten just said few words about this 4th international workshop that will take place in Belgium in 2010, as a continuation of the PennState one, but the precise date and location are not fixed yet.

D. Féron concluded saying that this kind of workshop is really interesting since it allows free discussions with the people involved in the field, but also people not involved directly and who can give an external/different point of view on the subjects evoked.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



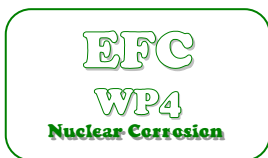
**EUROPEAN FEDERATION OF CORROSION
EUROPÄISCHE FÖDERATION KORROSION
FÉDÉRATION EUROPÉENNE DE LA CORROSION**

8.4. Other events?

D. Féron said his happiness with the occurrence of one workshop per year during the 3 next years but invited the audience to feel free to propose other workshops, maybe out of the nuclear waste management field (nuclear reactors for instance), or to associate the WP4 to "private" events organised by their companies.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

9. EUROCORRs

9.1. EUROCORR'2007

D. Féron recalled the topic of the event: "Industrial corrosion management focussing on the chemical and automotive industries and civil engineering".

He recalled that three sessions have been organised by the WP4:

- ✓ Nuclear Corrosion general session (04 presentations and 05 posters).
- ✓ Workshop "Corrosion monitoring in nuclear systems" organised by the ECG-COMON and chaired by A. Molander and St. Ritter (09 presentations and 02 posters).
- ✓ Workshop with the WP5 on "Initiation of Stress Corrosion Cracking in NPPs with emphasis on welds, models, hydrogen and ageing effects" (04 presentations and 02 posters).

D. Féron thanked the organisers for the two workshops, really good, interesting and well organised, and that brought a satisfactory attendance.

9.2. EUROCORR'2008

D. Féron reminded that EUROCORR'2008 will take place in Edinburgh (United Kingdom) on September 07th-11th, 2008 on the general topic "Managing corrosion for sustainability".

There are two sessions planned by the WP4:

- ✓ Nuclear Corrosion general session.
- ✓ Workshop proposed by M. Vankeerberghen (SCK-CEN) organised in collaboration with WP7 ("Education and computer") entitled "Computer modelling in corrosion".

R.W. Bosch came to say few words about this workshop that will be focused on computer modelling, not only in nuclear area. He recalled that the last workshop on the subject took place in 1990 (last publication: 1992), so it seems evident that things have changed since then (increase of computer speed, advances in numerical algorithms and solution techniques, software developments for application in corrosion); that is why the emphasis should be place on the current state-of-the-art in scientific and technological sense around the topics from continuum modelling to atomistic modelling.

R. Cottis (WP7 Chairman) said he is very happy to collaborate to the organisation of this event.

D. Féron thanked the orator and came back to the Summer School evoked during the 1st part of the Fall Meeting, proposing to have a kind of "Education session" during the EUROCORR congresses, to propose kind of introduction to the main topics of nuclear corrosion for people who are not familiar with these topics. Of course, the agreement of EUROCORR organisers should be required and obligatory.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

9.3. EUROCORR'2009

D. Féron reminded that EUROCORR'2009 will take place in Nice (France) on September 06th-10th, 2009 on the general topic " Corrosion: from nanoscale to the plant".

There are two sessions planned by the WP4:

- ✓ Nuclear Corrosion general session.
- ✓ Workshop co-organised with WP3 ("High temperature corrosion") entitled " Corrosion issues in future high temperature nuclear systems".

The topic of this workshop is close to the one held in Lisbon in 2005 where the publication of a Green Book was planned (not published due to the edition problems faced by the EFC at that time), so may this new workshop be an occasion to get up-dated papers to be edited this time.

D. Féron then presented the preliminary announcement of the workshop, to be submitted to WP3 Chairman and EUROCORR's organisers agreement before sending it.

D. Féron took the occasion to remind that co-organising workshop with other WPs and/or NACE (since the new relations between EFC and the US organisation) is welcome and encouraged.

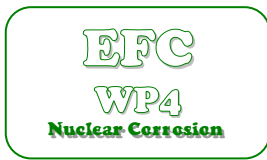
9.4. Next EUROCORRs

D. Féron recalled that EUROCORR'2010 will take place in Moscow (Russia) on September 13th-17th, 2010.

The date and location of EUROCORR'2011 are not fixed yet.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

10. EFC WP4 SPECIFIC MATTERS

10.1. EFC specific news

D. Féron informed/reminded the audience about some specific news:

- ✓ The creation of a World Corrosion Organisation (www.corrosion.org).
Funding by NACE, EFC, China and Australia.
The main objective of WCO is to raise public awareness of corrosion and corrosion control.
- ✓ The evolution of EFC status.
 - * No more funding countries.
 - * Membership opened to non-European countries, but EUROCORR congresses have to take place in Europe.
- ✓ The creation of a new WP "Corrosion and corrosion protection of drinking water systems" with W. Erning as WP initiator (kick-off meeting on September 13th, 2007).
- ✓ The election of a new STAC Chairman: D. Féron.
- ✓ New directives for the establishment and operation of WPs (to be approved):
 - * Creation of a Vice-Chairman position.
 - * No difference between delegates and personal members.
 - * Creation of an inaugural meeting for new WPs during which two delegates per societies are appointed.
 - * Chairman proposes and approves with the consent of the WP, the nomination and re-election of members.
 - * Vote: a simple majority is sufficient to approve a resolution (no vote on "scientific matters" is allowed).

10.2. New EFC WP4 3-years plan (2008-2010)

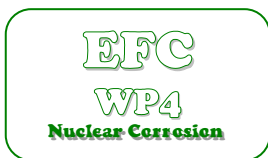
D. Féron reminded that the new WP4 3-year plan was proposed in Maastricht in 2006, and no comment was made nor received. He recalled that he proposed to keep the same objectives than in the previous plan and go on with the actions engaged.

The new WP4 3-years plan presents the following objectives:

- ✓ To provide links between European teams and EU funded programs in nuclear corrosion field, with an opening on to the world.
- ✓ To initiate and stimulate opportunities of exchanges on scientific and technical subjects related to nuclear corrosion, particularly on today main nuclear research areas.
- ✓ To promote corrosion science and technical developments by events such as seminars, workshops, publications, ...

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1



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

with specific actions:

- ✓ Two WP meetings per year:
 - * A Spring Meeting, more focus on one or few items.
 - * An annual general Meeting during EUROCORRs.This point has been accomplished during the previous 3-years plan (2003-2006) but not in 2007 with the cancellation of the Spring Meeting.
- ✓ Specific seminars/workshops, either during EUROCORRs, or at any time since they are in connection with EU programs or on specific subjects related to the WP4 fields of interest.
- ✓ Promote active task forces (groups) on specific subjects.
D. Féron reminded to feel free to propose new groups.
- ✓ Publish proceedings, in EFC Series (one book per year) and selected papers in others publications for a larger visibility.
This year, one Green Book is already planned for the proceedings of the ECG-COMON workshop (probably published in 2008), and maybe another one in 2009 after the SACNUC symposium, but other members' proposals are welcome.
- ✓ Develop links between EFC WP4 and other nuclear organisations (EURATOM, OECD/NEA, IAEA, ...).

Then, D. Féron asked for comments. As no comment was made, the new 3-years plan is approved.

10.3. Next meetings

D. Féron recalled the future meetings:

- ✓ EFC WP4 Spring Meeting 2008, more focused on Nuclear Corrosion Summer School.
R. Cottis proposed to receive this meeting in Manchester. The proposal is submitted to the audience and approved. The date will be precised later on.
- ✓ ECG-COMON annual meeting.
June 16th-17th, 2008 in Villigen (Switzerland), only for members.
- ✓ EUROCORR' 2008.
September 07th-11th, 2008 in Edinburgh (United Kingdom) with a WP4 general session, a workshop on "Computer modelling in corrosion" and the WP4 Fall Meeting.
- ✓ SACNUC workshop (EFC event n°311).
October 21st-23rd, 2008 in Brussels (Belgium).

11. CLOSURE

D. Féron thanked the attendance and closed the meeting at 18.00, recalling the ECG-COMON Fall Meeting to come just after.

EFC WP4 "NUCLEAR CORROSION"

Chairman	Damien Féron	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Secretary	Mylène Belgome	CEA/Saclay	DEN/SAC/DPC/SCCME	Bâtiment 458	F-91191 GIF SUR YVETTE Cedex
Scientific Secretary	Odile de Bouvier	EDF	DIN/CEIDRE	2 rue Ampère	F-93206 SAINT DENIS Cedex 1