

NPC 2010

Nuclear Plant Chemistry Conference 2010
(International Conference on Water Chemistry of Nuclear Reactor Systems)

Call for Papers

Quebec City, Canada
October 3-7, 2010
Loews le Concorde Hotel



The Nuclear Plant Chemistry Conference

The **International Conference on Water Chemistry of Nuclear Reactor Systems** focuses on the latest developments in the science and technology of water chemistry control in nuclear reactor systems.

What began in the UK in 1977 as the Bournemouth Conference Series has of late been held biennially under the organization of a host country. For 2010, that country is Canada.

The Conference is a forum where utility scientists, engineers and operations people can meet their counterparts from research institutes, service organizations and universities to address the challenges of chemistry control and degradation management of their complex and costly plants for the many decades that they are expected to operate. In 2010 the focus will be on operating experience and the subsequent lessons to be learned, with supporting material on new developments and research.

NPC 2010 follows the successful recent conferences:

NPC 2008

Berlin, Germany, organized by VGB PowerTech

Int'l Water Chemistry Conference, 2006

Jeju Island, South Korea,
organized by KAERI, KNS in co-operation with KHNP

Int'l Water Chemistry Conference, 2004

San Francisco, USA, organized by EPRI

Int'l Conference on Environmental Degradation, 2007

Whistler, Canada, organized by CNS



Features of the Conference

Quebec City – the Conference will be held in the heart of Old Quebec City, which in 2008 celebrated its 400th anniversary. The city is renowned for its old-world charm, history and fine cuisine and as the centre of the Province's unique and very dynamic culture.

October 3-7 – timed for the peak of autumn colour.

Loews le Concorde Hotel – located within a few minutes walk from the heart of old Quebec City, it is the perfectly-located and -appointed venue.

Conference Format – will be the standard four days of single-session presentations; plus Poster Sessions which will be promoted as part of the Technical Sessions. All Proceedings will be in English.

8th Int'l Radiolysis, Electrochemistry & Materials Performance Workshop – will be held as an associated, but otherwise free-standing, event on Friday, October 8, 2010.

Walking Tours of Old Quebec City – in various themes and languages; and possibly for your consideration, a **Canadian Forests in Autumn Excursion**.

Conference Organizers

Conference Honorary Chair

Paul Spekkens, *Ontario Power Generation*

Conference General Chair

Derek Lister, *University of New Brunswick*. dlist@unb.ca

Technical Program Chair

Peter Angell, *AECL*. angellp@aecl.ca

Workshop Chair

John Roberts, *JGRChem. Inc.*. alchemy@tnt21.com

Executive Chair

Bill Schneider,
Babcock & Wilcox Canada wgschneider@babcock.com

Event Administrator

Elizabeth Muckle-Jeffs. Elizabeth@theprofessionaledge.com
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Call for Papers

Technical Paper Abstracts are invited in the following topic areas. There is special interest in the experience of plants with Alloy 800 as well as of those with Alloy 600 and Alloy 690 steam generator tubing.

Chemistry and NPP Performance

The role of chemistry in improving nuclear power plant performance including power uprating, life extension and control of degradation

PWR and VVER Operating Experience

Primary coolants, including effects of pH, lithium, boric acid, enriched boric acid, potassium, ammonia and zinc; activity build-up and radiation control

CANDU/PHWR Operating Experience

Primary coolant, moderator and other systems and system operation unique to CANDU/PHWR including: high primary-side pH, flow-accelerated corrosion, deposition etc.

Pressurised Water Scientific Studies

Fundamental and laboratory studies; computer modelling

Steam Cycle Operating Experience

Secondary chemistry including: steam generator degradation, flow-accelerated corrosion, effects of amines and dispersants, sludge management, lay-up optimisation

BWR Operating Experience

Hydrogen water chemistry, noble metal treatment, zinc, transient-chemistry issues, corrosion, radiolysis and combustible gas management, activity build-up and radiation control

Boiling Water Scientific Studies

Fundamental and laboratory studies; computer modelling

Water and Waste Treatment, Cooling Water Systems, Auxiliary Systems

Water purity control and advanced processes and monitoring technology, scale mitigation in condensers and cooling towers, chemistry control in auxiliary systems, waste water management

Materials Aging and Mitigation of Degradation

Control of corrosion processes, inhibitors, microbiologically influenced corrosion

Chemistry and Fuel Performance

Effects of chemistry on fuel performance, crud-related fuel performance issues – including crud induced power shifts; tramp uranium and fission products

Cleaning and Decontamination

Steam generator chemical cleaning, fuel cleaning, decontamination

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Call for Papers (continued)

Lifetime Management

Chemistry and corrosion issues related to lifetime management and countermeasures

Chemistry Optimization Programs

Development and pre-implementation assessment of Utility Chemistry Optimization Plans

Chemistry Compliance Management

Chemistry Program Management, audits, sampling, monitoring, analysis programs

Future Developments

Chemistry developments for future reactor systems including supercritical water, GEN IV and other advanced system conditions

8th Int'l Radiolysis, Electrochemistry & Materials Performance Workshop

The 8th Int'l Radiolysis, Electrochemistry & Materials Performance Workshop will be held as an associated, but otherwise free-standing, event on Friday, October 8, 2010. Requests for "Invitation to Present" should be submitted as for NPC 2010 but specifically for the Workshop. Separate Workshop Proceedings will be issued. For organization and registration information regarding this Workshop, see the website at www.cns-snc.ca

Abstract Review

All submitted Abstracts will be formally reviewed. Authors will be advised of their acceptance.

Advance Program

The Advance Program will be released at the time of Author Notification and will include all Paper Titles and Authors as well as the general layout of the Conference. The submissions to the Workshop will be treated similarly.

Final Program

The Final Programs for NPC 2010 and the Workshop will include the full Abstracts of all Papers.

Questions and Answers (Q&A)

Discussions at the time of presentation will be formally documented. Questions raised during presentations will be submitted to the Presenters for documentation of their responses. The documented Q&As will be included in the Proceedings.

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Conference Proceedings

The Conference Proceedings and the Workshop Proceedings will be published on separate CD-ROMs and will be mailed to all registrants.

Milestone Dates

Abstracts Due2009 November 16
Author Notifications 2010 January 29
Advance Program 2010 January 29
Papers Due2010 June 25
Conference2010 October 3 to 7
Workshop 2010 October 8

Abstract Submission

All prospective Authors are invited to submit a 500-word Abstract by the above date. Abstracts may be submitted via the link at www.cns-snc.ca. All abstracts MUST be submitted electronically in Microsoft Word format.

All Papers are due by the above date. Authors will be provided guidelines for full paper presentation and submission at the time of author notification.

If you have technical questions about Abstracts for NPC 2010 please contact: Peter Angell, Technical Program Chair (angellp@aecl.ca).

For technical inquires regarding the Workshop please contact: John Roberts, Workshop Chair (alchemy@tnt21.com).

Event Administrator – The Professional Edge

If you require assistance with submissions or anything else related to NPC2010, please contact: Elizabeth Muckle-Jeffs (Elizabeth@theprofessionaledge.com)

Registration and Hotel Accommodation

For registration and hotel accommodation information, see the website at: www.cns-snc.ca. For additional information please contact the Event Administrator (see above).

Conference Sponsor and Organizer

The Canadian Nuclear Society is pleased to serve as the sponsor and organizer of the NPC 2010 Conference, which is held in cooperation with the International Atomic Energy Agency.



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