



**EXTENDING THE LIFE AND RELIABILITY OF POWER PLANT
EQUIPMENT THROUGH IMPROVED CHEMICAL CONTROL**

Hawthorn Suites by Wyndham Champaign
Champaign, Illinois

www.conferences.illinois.edu/eucw

Sponsored by



Center for Innovation in Teaching & Learning

and the Prairie Research Institute—Illinois State Water Survey

About the Workshop

Now in its 36th year, this comprehensive program features state-of-the-art information on controlling corrosion and improving operation efficiency for fossil- and nuclear-fueled power plants. This year's program is geared toward improved training and continuing education of personnel responsible for electric utility chemistry.

More than 3,600 chemists, consultants, and power plant administrators have attended the workshop since its inception in 1981. The 2016 program was developed by a committee of representatives from Midwestern electric utilities, the Illinois State Water Survey, the University of Illinois at Urbana-Champaign, and consultants serving the power industry.

Some of the most popular features of the workshop are the Utility Experience

presentations, in which seasoned professionals from utility companies discuss their experiences on a range of topics. The entire workshop has been structured to encourage participation from attendees.

A USB memory stick containing copies and/or outlines of papers presented, current water treatment papers, and reports is included in the registration fee.

WHO SHOULD ATTEND

This workshop is specifically designed for personnel involved in day-to-day decisions affecting the performance of electric utility generation in fossil-fueled and nuclear power plants. The program applies equally to power plant chemists and engineers, as well as power plant designers and consultants, industrial and institutional plant engineers, managers, and operators.

CONTINUING EDUCATION UNITS

Each participant completing the workshop is eligible for 1.3 Continuing Education Units (CEUs) from the University of Illinois at Urbana-Champaign. The CEUs are nationally recognized units of achievement, which may be used as evidence of increased performance capabilities and for professional advancement. If your position requires CEUs for certification renewal, please inquire at the registration desk when you arrive for the workshop.

Approval is pending for this program to apply to requirements for Wastewater Treatment Plant Operators.

This workshop also offers Professional Development Hours (PDHs) for professional engineers.

Pre-Workshop Seminar

TUESDAY, JUNE 7, 2016 ■ 8:00–11:30 AM



THE BASICS OF MAKEUP WATER TREATMENT

The 36th Annual Electric Utility Chemistry Workshop will feature an optional pre-workshop seminar on the basics of an important aspect of power plant water treatment, makeup water production. The seminar will be taught by Brad Buecker, Kiewit Engineering and Design Co, and Bill Willersdorf of Veolia.

All steam generators require high-purity makeup water to compensate for boiler blowdown, system leaks, and other process losses. While conventional makeup technologies are still very valid in many cases, increasingly plants are being required to utilize raw water sources that contain

impurities above and beyond what were once considered normal. Such sources include treated municipal wastewater and deep well water. This seminar examines state-of-the-art techniques for purifying makeup water, from initial suspended solids removal to demineralization with reverse osmosis and ion exchange systems.

Seminar topics will include:

- A review of the primary impurities in raw water supplies, both conventional and manmade
- Techniques for removing suspended solids from raw water, including modern clarifier designs and the well-

established techniques of micro- and ultrafiltration

- An overview of biological processes for removal of ammonia, phosphorus, and organics from municipal wastewater effluent
- Reverse osmosis operation and methods to maintain membrane viability and performance
- The evolution of ion exchange treatment from a core process into a polishing procedure
- Makeup water sampling details, including sample point location and critical sampling parameters

Schedule of Events

TUESDAY

NOON REGISTRATION

1:30 PM WELCOME

K. Anthony Selby, Water Technology Consultants, Inc.,
Workshop Chair

1:40 PM Safety & Ergonomics Awareness and Best Practices in the Gen Station

Dave Stamp, NIPSCO

2:10 PM On-Line ppb-Level Chloride and Sulfate Measurement by Micro-Capillary Electrophoresis

David Gray, Mettler Toledo Thornton

2:40 PM Implementing Closed-Circuit Desalination (CCD) Reverse Osmosis to Minimize Water Footprint & Reduce Operating Costs in a Drought Stressed Region

Michael Boyd, Desalitech

3:10 PM BREAK

3:30 PM Q&A SESSION

3:45 PM An Overview of Cycle Chemistry Approaches in Electric Utility Plants

Tony Selby, Water Technology Consultants, Inc.

4:15 PM Trends in Mercury Wet Deposition and Mercury Air Concentrations across the U.S. and Canada

David Gay, Illinois State Water Survey

5:00 PM RECEPTION AND VENDOR DISPLAY

Vendors in the industry will have displays of their latest products and services for participants to view during the reception. Check the Web site for a list of vendors: www.conferences.illinois.edu/eucw.

7

Tuesday

“Offers the best value for training for the money.”

WEDNESDAY

7:30 AM REGISTRATION

8:00 AM Update on Environmental Regulations Effecting the Utility Industry now and in the Future

Bert Valenkamph, Norther Indiana Public Service
Company (NIPSCO)

8:30 AM Cleaning of Water-Based Stator Cooling Systems with EDTA.

David Daniels, M&M Engineering Associates, Inc.

9:00 AM Cycle Chemistry Experience Reports

Bob Mitzel, Dynege

9:30 AM BREAK

10:15 AM Q&A SESSION

10:30 AM Assessment of System Response to Poly Acrylic Acid Injection as a Sludge Mitigation and Thermal Performance Recovery Means at Nuclear Power Plants

Jeff Waites, Southern Nuclear Operating Company

11:15 AM Materials Related to Power Plant Chemistry; Part II – Fabrication and NDE

Mark Vogt, Dynege

11:45 Q&A SESSION

1:00 PM Treatment Optimization Through Effectiveness Monitoring

George Licina, Structural Integrity

1:30 PM Chemistry Training and Knowledge Sharing Options Available to Power Generation Companies' Employees

Nisso Fazliddinova, Nextera Energy Inc/ Florida Power
& Light

2:00 PM EDI Measurement of Cation Conductivity

Randy Turner, Swan Analytical

2:30 PM BREAK

3:00 PM Elements of a Comprehensive Cycle Chemistry Program

Stephen Shulder, EPRI

3:30 PM Life Extension of Shell and Tube Heat Exchanger and Condenser Tubing Using Protective Coatings

Jim Mitchell, Plastacor

4:00 PM Analytical Techniques for the Characterization of Deposits in Water Wall Tubes

Scott Reeves, Consumers Energy

4:30 PM Iron and Copper Monitoring

Ken Kuruc, Hach

5:00 PM Q&A SESSION

8

Wednesday

THURSDAY

7:30 AM REGISTRATION

8:00 AM INTRODUCTION

K. Anthony Selby, Water Technology Consultants, Inc.,
Workshop Chair

8:01 AM Thirty Years of experience of fighting corrosion and deposition in Boilers

Bill Boyd, U.S. Water

8:30 AM Degassed Acid Conductivity— A Vital Parameter in a Growing World of Renewables

Yann Bouvier, Waltron, Bull & Roberts

9:00 AM Converting Mixed Metallurgy Plants to AVT(O) Feedwater Treatment

Steve Klotz, Consumers Energy

9:30 AM BREAK

10:00 AM Q&A SESSION

10:15 AM Use of Monochloramine to Reduce RO Biofouling and Operating Costs

Bob Mitzel, Dynege

10:45 AM Chemical Free Dechlorination to protect RO and Demineralizer treated Boiler Feed Water

Ytzhak Rozenberg, Atlantium

11:15 AM FGD Wastewater Evaporation Pilot Project at a Large Power Plant

Ben Laurent, Heartland Technology Partners, LLC

11:45 Q&A SESSION

9

Thursday

“The workshop provides great opportunities to talk with other professionals in my field.”

General Information

REGISTRATION

The full-meeting registration fee includes all conference materials, Tuesday reception, Wednesday lunch, and morning and afternoon breaks. If received on or before May 24, the fee is \$400. After May 24, the fee will be \$450.

Single-day registration is also available. The registration fee of \$225 includes meals or breaks served on the day you attend, speaker handouts for that day, and a participant roster.

The pre-workshop seminar registration fee includes all seminar materials and morning break. If received on or before May 24, the fee is \$50. After May 19, the fee will be \$75.

Payment in full is expected upon registration. Please use the registration form as your invoice. Phone or fax registrations must have a credit card number. Payment by cash, check, or credit card must accompany all on-site registrations.

LOCATION

All program sessions will be held at the Hawthorn Suites by Wyndham Champaign, 101 Trade Centre Drive, Champaign, Illinois 61820. Phone: 217-398-3400.

WORKSHOP SCHEDULE

Registration for the regular workshop begins Tuesday, June 7 at noon, followed by the Opening Session from 1:30 to 5:00 PM. A social hour from 5:00 to 8:00 PM gives participants the opportunity to talk with colleagues, vendors, and speakers. The workshop adjourns at noon on Thursday, June 9.

VENDOR DISPLAYS

Companies who work with the Electric Utility Chemistry industry are encouraged to participate with a display during the conference. Space is limited, so new companies are encouraged to contact Scott Randall at svrandal@illinois.edu as soon as possible if they are interested in being a vendor.

CANCELLATIONS

If you register and find you cannot attend, a refund, less a \$50 processing fee, will be made if you notify the CITL Conference Services office (217-244-9687 or svrandal@illinois.edu) by May 24, 2016. No refunds will be issued after May 24. You may send someone in your place.

LODGING

Reservations should be made directly with the hotel. Be sure to mention that you are attending the "Electric Utility Chemistry Workshop," as a block of rooms has been reserved at special conference rates. Make your reservations early—after May 7, 2016, the rooms will be available on a first-come, first-served basis.

Hawthorn Suites by Wyndham Champaign
101 Trade Centre Drive
Champaign, IL 61820
217-398-3400
Conference Rate: \$74.99, Single or Double

TRANSPORTATION

The Champaign (Willard) Airport offers daily flights to and from Chicago O'Hare and Dallas (by American Eagle). Amtrak service is also available. Champaign-Urbana is accessible from interstates 72, 74, and 57; it is 135 miles south of Chicago and 120 miles west of Indianapolis.

PROGRAM PLANNING COMMITTEE

Al Aschoff, Consultant (emeritus member)
Bill Boyd, Arizona Public Service
Jacob Bray, We Energies
Brad Buecker, Kiewit Power Engineers
Prentiss Carter, Dynegy
Chuck Curtiss, Illinois State Water Survey
Steve Donner, Donner Solutions LLC
Nisso Fazliddinova, Florida Power and Light
Warren Gilbert, Consultant
Scott Glover, Prairie State Generating Company
Ron Melton, Western Farmers Electric Coop
Bob Mitzel, Dynegy
Scott Randall, University of Illinois at Urbana-Champaign
Scott Reeves, Consumers Energy, LLC
K. Anthony Selby, Water Technology Consultants, Inc.
Chris Skates, Electric Energy, Inc.
Dave Stamp, Northern Indiana Public Service Company (NIPSCO)
Chris Taylor, Ameren Missouri
Ronald Wine, Ronald D. Wine Consulting
Elaine Wolff, University of Illinois at Urbana-Champaign

“My supervisor always approves my request to attend this workshop.”



FOR MORE INFORMATION, CONTACT:
Center for Innovation in Teaching & Learning
University of Illinois at Urbana-Champaign
901 West University Avenue
Urbana, IL 61801
Phone: 217-244-9687
Fax: 217-333-9561
E-mail: nsimp1@illinois.edu

SESSIONS INCLUDE

- Critical aspects of the utility water cycle
- Tutorials given by internationally known experts
- Practical applications from electric utility experience

Format geared toward improved training and continuing education of personnel responsible for electric utility chemistry

2016 Training Session on **The Basics of Makeup Water Treatment** to be held on Tuesday morning (June 7)

Registration Form

Note: Payment in full is expected upon registration for the workshop. Please use the registration form as your invoice.

For vendor exhibit registration, contact **Nancy Simpson** at **217-244-9687** or **nsimp1@illinois.edu**.

4 EASY WAYS TO REGISTER

1

Online

www.conferences.illinois.edu/eucw

2

Fax

Fax your registration form to 217-333-9561.

3

Phone

Call 217-244-9687 to register by phone.

4

Mail

Complete the form and mail to:

Nancy Simpson
Center for Innovation in Teaching & Learning
University of Illinois at Urbana-Champaign
901 West University Avenue, Suite 201
Urbana, IL 61801 USA



Early Registration Discount through May 24

CONTACT INFORMATION

Please type or print name exactly as it should appear on badge

First Name _____

Last Name _____

Organization _____

Address _____

City _____

State _____ Zip _____ Country _____

Phone _____ Fax _____

E-mail _____

Please check if attending your first Electric Utility Chemistry Workshop

REGISTRATION FEES

The Basics of Makeup Water Treatment

\$50 (on or before May 24) \$75 (after May 24)

Workshop Fee

\$400 (on or before May 24) \$450 (after May 24)

One-Day Fee

\$225

Indicate which day you will attend Tuesday Wednesday Thursday

Reference Materials Only

\$75 (each person with full registration receives these materials)

METHOD OF PAYMENT

Check enclosed (make payable to the University of Illinois)

Please charge credit card Visa MasterCard AmEx Discover

Card # _____

Expiration Date _____ Security Code _____

Signature _____

The Security Code is a 3-digit, non-embossed number printed on the right upper corner of the signature panel on the back of Visa, MasterCard, and Discover cards. On American Express, the 4-digit number is printed above the account number on the front of the card. The Security Code is recorded as an additional security precaution.

Cw
Cooling Water

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Instrumentation

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Cycle Chemistry

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Aq
Air Quality

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Cw
Cooling Water

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Instrumentation

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Cc
Chemical Control

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Cs
Chemical Safety

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C



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University of Illinois at Urbana-Champaign
901 West University Avenue, Suite 201
Urbana, IL 61801

MAILROOM:
If the person on the label is no longer employed at your organization, please route this material to the replacement or department supervisor.

To receive additional information about the workshop: Call 217-244-9687 or e-mail nsimp1@illinois.edu.

36th Annual
**ELECTRIC
UTILITY
CHEMISTRY
WORKSHOP**
June 7-9, 2016

Aq
Air Quality

47
Cw
Cooling Water

3
I
Instrumentation

7
Aq



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