CURTISS-WRIGHT

Nuclear Division | **Scientech**

Fossil Power Plant Chemistry

A Scientech Training Course

September 16-20, 2019
Clearwater, Florida

Course Overview

This course provides fossil power plant personnel with an understanding of the chemistry principles related to system chemistry control, water treatment, and analytical methods. In addition, guidelines for chemistry control programs such as frequency of analyses, chemistry specifications and limits, data evaluation, and laboratory quality assurance are presented.

- Course text includes:
  - Fossil Power Plant Chemistry
  - Scrubber Chemistry
  - Boiler Chemical Cleaning
- Designed to provide fossil plant personnel with an understanding of the chemistry principles related to:
  - System chemistry control
  - Water treatment
  - Analytical methods
- Subjects of interest include:
  - Fundamental power plant chemistry
  - Fundamental corrosion control
  - The chemistry associated with boiler chemical cleaning
  - The flue gas scrubbing system chemical process
- In addition, guidelines for chemistry control programs such as:
  - Frequency of analyses
  - Chemistry specifications and limits
  - Data evaluation Calcium-based wet scrubbing

Who Should Attend

This course is appropriate for power plant personnel who have laboratory experience. It is particularly suitable for those needing an understanding of the overall fossil chemistry program.

This Course Covers

This course combines dynamic teaching methods with cuttingedge and relevant information targeted to power plant chemistry personnel. Following is an abbreviated list of the topics covered:

- **Power Plant Chemistry**
  - — Water chemistry concepts
  - — Corrosion and corrosion control
  - — System chemistry control specifications and guidelines
  - — Water treatment methods and ion exchange theory
  - — Chemistry control surveillance and analytical methods
  - — Laboratory analyses
  - — Data management and evaluation
- **Scrubber Chemistry**
  - — Process description
  - — Lime/limestone process chemistry
  - — Gas limited interaction
  - — Liquid-liquid interactions
  - — Liquid-solid interactions
  - — Monitoring process performance
  - — Acquiring and handling samples
- **Boiler Chemical Cleaning**
  - — Boiler deposits
  - — Materials of construction
  - — Chemical cleaning solutions
  - — Factors controlling chemical cleaning
  - — Chemical cleaning process
  - — Frequency of chemical cleaning
  - — Safety
  - — Post-cleaning inspection

About the Instructor

In his 14 years at Florida Power Corporation's Crystal River facility, Mr. Witherow held positions as Laboratory Supervisor, Plant Chemist, and Head of Corporate Fossil Chemistry. He also served as Corporate Quality Control Officer for the State of Florida COMPQA program.

- Over 30 years experience in industries including:
  - Organic feedstock production
  - Coal gasification pilot plant research
  - Environmental laboratory direction
  - Electric utility operation
- Utility experience includes:
  - Oversight of corporate chemistry program
  - Technical support to simple cycle combustion turbines and combined cycle CT/HRSG plants
- High purity water production processes includes:
  - Cold lime softening
  - Demineralization
  - Evaporation
  - Reverse osmosis
- Cooling tower experience includes:
  - Hyberbolic and mechanical draft salt water systems using dispersants, penetrants, and biocides for fill deposition control
- Central laboratory oversight includes:
  - Fuel analyses (oil and coal)
  - Transformer oil analyses
  - Water analyses using AA, HGA, ICP, automated and manual bench testing
  - Field sampling and analyses protocols
- Coal gasification pilot plant experience includes:
  - High-pressure sampling
  - Chemical analyses of synthesis gas and waste streams
  - Analyses of fuels, slags, ashes, and chemical deposits

Course Schedule

Monday through Friday Schedule, September 16-20, 2019

M: 9/16	1:00 pm	—	5:00 pm	Course w/afternoon break
TWT: 9/17-19	7:30 am	—	8:00am	Continental breakfast in training room
	8:00 am	—	12:00 noon	Course w/ morning break
	12:00 noon	—	1:00 pm	Lunch at Sheraton's Island Grille Café
	2:00 pm	—	5:00 pm	Course w/afternoon refreshment break
F: 9/20	7:30 am	—	8:00am	Continental breakfast in training room
	8:00 am	—	12:00 noon	Course w/ morning break

Registration Information

Fossil Power Plant Chemistry

The registration fee is $3885.00 per attendee and includes all course materials; continental breakfast each day; full lunch in Sheraton's Island Grille Café each day; afternoon refreshment breaks each day, and a Certificate of Educational Achievement for each student that successfully completes the course.

Register on-line at our secure web site:
www.chemistryapplications.scientech.com

1. In the menu in the middle of the screen, click **Event Schedule**
2. Under the 2019 heading, click **Fossil Power Plant Chemistry, September 16-20**
3. Click **Registration** in the menu box on the left side of the screen
4. Enter the registrant's e-mail address and leave the ID Code Box blank
5. Click **Continue** to complete the registration
6. A confirmation will be sent to you via e-mail

Register Today!

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The latest information on all Scientech Chemistry training courses and meetings is available on our Web site at *www.chemistryapplications.scientech.com*

Cancellation Policy

Scientech reserves the right to cancel this course at any time and refund the full amount of all registration fees paid. Scientech must have a minimum number of students to hold this course. When the minimum number of attendees is reached, Scientech will send a notice (21) days prior to the course start date, that the required quota has been met or the course has been cancelled. Any cancellations made after the date of the notification e-mail, the attendee will be charged a 75% cancelation fee.

Please do not make any non-refundable travel reservations until we tell you that the course will definitely be held as scheduled. Substitutions can be made at any time.

Hotel

A block of rooms has been reserved at the Sheraton Sand Key Resort at the rate of $172.00 per night. Please make your hotel reservations directly with the Sheraton by calling 727.595.1611. Be sure to specify that you are attending this Scientech course to receive the reduced rate. The room block will be released 30 days before each course. After that, the Sheraton cannot guarantee rate or availability.

Contact Information:

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