

Aim of Course

The aim of this course is to provide an understanding of the CANDU fuel design, performance and operation, and how the fuel interacts with the interfacing systems. The course will be of great interest to the fuel designers, manufacturers, station operations, fuel channel and fuel handling system designers, safety analysts, performance and inspection staff.

Course Outline

This course will provide an overview of the CANDU fuel design, performance and operation, with a special emphasis on the systems that interface with it. Fuel, more than any other reactor components, interfaces with many different systems. This course is designed to enlighten those involved in fuel design and performance of the interfaces; and vice versa. The course will describe the design of the bundle, the detailed nuclear physics of its operation, the thermal-hydraulic performance, the fuel handling, fuel and physics of the reactor, the discharge and storage of the fuel.

Registration

Please register on-line via the link on the CANDU Fuel Technology Course web page, which you can reach via the CNS web site, at <http://www.cns-snc.ca>.

The registration fees are shown below, and include GST (GST # 870488889RT)

- CNS Member: \$730.00 [Must be a CNS member in good standing]
- Non-CNS Member: \$835.00
- Full-time student or CNS retiree: \$360.00

For registration information, please communicate with the CNS Office Manager:

Mrs. Denise Rouben
Canadian Nuclear Society
480 University Ave., Suite 200
Toronto, Ont. M5G 1V2
Tel.: 416-977-7620 Fax: 416-977-8131
E-mail: cns-snc@on.aibn.com

HOTEL ACCOMMODATION **Hilton Garden Inn**

Please make accommodation arrangements, if required, directly with the hotel (905) 829-1145. Special group rate of \$124 + tax per night is available for course participants if booked before September 21, 2009. Refer to "CNS Fuel Technology Course" at time of booking.

CANDU FUEL TECHNOLOGY COURSE

**Canadian Nuclear Society
Fuel Technology Division**



2009 October 5-7

Hilton Garden Inn,

2774 South Sheridan Way, Oakville, Ontario

Course contact:

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CANDU Fuel Technology Course
October 5-7, 2009
Mississauga
Preliminary Program

Objectives of the Course

- To provide the understanding of CANDU fuel design, performance and operation
- To foster the understanding of the systems that interface with fuel and the effects on performance
- To promote knowledge of fuel within the CANDU industry

Day 1

08:00 **Registration**

08:30 **Opening Remarks**

Joseph Lau, AECL

Erl Kohn, AMEC-NSS

08:45 **Fuel Design Requirements**

Al Manzer, Cantech

09:30 **Design Overview**

Erl Kohn, AMEC-NSS

10:30 **Coffee Break**

10:45 **Design Control & QA**

David Bella-Boudreau, AECL

11:30 **Fuel Design Codes and Predictions**

Mukesh Tayal, AECL

12:15 **Lunch**

13:15 **Qualification Tests**

Krishna Chakraborty, AECL

14:00 **Specifying the Design**

Paul Chan, Bruce Power

14:45 **Coffee Break**

15:00 **Fuel Physics Within the Bundle**

Ben Rouben, 12 & 1 Consulting

17:00 **End of Day 1 lectures**

Day 2

08:30 **Reactor Fuel and Physics Operation**

Charles Olive, AMEC-NSS

10:15 **Coffee Break**

10:45 **UO₂ Refining**

Steve Douglass, Cameco

11:30 **Fuel Manufacturing**

Min Lee, GEC

12:15 **Lunch**

13:15 **Fuel Handling**

TBD, AECL

14:00 **Chemical and Material Environment**

TBD

14:45 **Coffee Break**

15:15 **Fuel Defect Detection**

Eugene Suk, AECL

16:00 **Advanced Fuel Bundle Design**

Ki-Seob Sim, AECL

16:45 **End of Day 2 lectures**

17:30 **Dinner Reception**

18:00 **Dinner**

Guest Speaker, TBD

Day 3

08:30 **Fuel Performance Assessment**

Steve Wadsworth, AMEC-NSS

09:30 **Post Irradiation Fuel Examination**

John Montin, AECL

10:30 **Coffee Break**

10:45 **Fuel Safety**

Samir Girgis, AECL

12:00 **Lunch**

13:00 **Fuel CHF/CCP**

Glen Harvel, UOIT

14:00 **Long Term Management of**

Canada's Used Nuclear Fuel

TBD, NWMO

14:45 **Closing Remarks**

Erl Kohn, AMEC-NSS

Roman Sejnoha, Cantech