



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

(FSME-11-071, July, Training, H-315)

July 26, 2011

ALL AGREEMENT STATES, MICHIGAN

ACCEPTANCE TO THE IRRADIATOR TECHNOLOGY COURSE (H-315) (FSME-11-071)

PURPOSE: To provide the list of students selected for the Irradiator Technology Course (H-31 5).

BACKGROUND: NRC provides the list of students and instructions to the States to help ensure that States with candidates on waiting lists will have an opportunity to fill vacated slots that may open up after this notification letter has been sent

DISCUSSION; Enclosure 1 is the list of students from the Agreement States selected to attend the September 12-16, 2011, Irradiator Technology Course (H-31 5). Please provide the list of students and the instructions (Enclosure 2) to each individual from your program that is on the list. Enclosed for your information is a tentative schedule for the course (Enclosure 3). Students attending this course will be paid lodging and per diem by the U.S. Nuclear Regulatory Commission (NRC). Students should make their travel arrangements through Carlson Wagonlit Travel at 1-866-250-2160 immediately and then submit their travel information needed for NRC to issue their travel authorization. Please go to the following website to download the Travel Application Form <http://nrc-stp.ornl.gov/training.html> and then send it to Brenda.Usilton@nrc.gov or fax it to 301-415-3502.

We ask that you inform us of any cancellations 30 days prior to the course starting date or as soon as you are aware that the student cannot attend the course.*

*This information request has been approved by OMB 3150-0029 expiration 11/30/2013. The estimated burden per response to comply with this voluntary collection is approximately 8 hours. Send comments regarding the burden estimate to the Records and FOIA/Privacy Services Branch (T-5F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0029), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection

If you have any questions regarding this correspondence, please contact me at 301-415-3340 or the individual named below

POINT OF CONTACT: Brenda G. Usilton
TELEPHONE: (301)415-2348

INTERNET: Brenda.Usilton@NRC.GOV
FAX: (301)415-3502

/RA/ by James G. Luehman for

Terrence Reis, Acting Director
Materials Safety and State Agreements
Office of Federal and State Materials
and Environmental Management Programs

Enclosures:

1. List of students
2. Instructions for students
3. Tentative Schedule

IRRADIATOR TECHNOLOGY COURSE (H-315)
SEPTEMBER 12-16, 2011
LAVAL, CANADA

STATE	STUDENT(S)
MARYLAND Dept. of the Environment 1800 Washington Blvd., Suite 750 Baltimore, MD 21 230-1 718	Fatima Adeyemo
NEW MEXICO Environment Dept Harold S. Runnels Building 1190 St. Francis, Dr, Rm S2100 Santa Fe, NM 87502-5469	Santiago Rodriguez
OHIO Dept. of Health 246 North High Street Columbus, OH 43215	Patrick Becker

INSTRUCTIONS TO STUDENTS

ACCEPTANCE: This is to advise you that those individuals in Enclosure 1 have been accepted for participation in the training course (H-315), "Irradiator Technology." This course is scheduled to be presented by MDS Nordion on September 12-16, 2011, at the Canadian Irradiation Centre (CIC), 535 Boulevard Cartier, Laval, Quebec, Canada, H7V 3S8, Contact: Mr. Yves Doyle, MDS Nordion, work - 450-687-5165, cell phone – 613-697-9837. Maps of the area can be found at www.cic.nordion.com.

COURSE: This course will be conducted beginning on September 12, 2011, at 9:00 a.m. and end at 5:00 p.m. each day except for Friday, September 16, 2011, when the class is scheduled to end between 1:30-2:30 p.m. Travelers will need a passport to enter into Canada.

LODGING & TRAVEL: You should plan to arrive on Sunday, September 11, 2011, and depart on Friday, September 16, 2011. Participants must make their own lodging and travel arrangements. Individuals should request a government rate at the hotels. Below are a number of hotels in the area. If traveling by air, you need to contact Carlson Travel at 1-866-250-2160 for airline reservations. The per diem for the area is \$164 for lodging, \$122 for meals and incidents, not to exceed \$286. No rental cars will be issued. Please complete the Travel Application Form which is located at <http://nrc-stp.ornl.gov/training.html>. You can also go to the same website to receive a copy of the travel instructions and voucher for reimbursement. Please return the travel form to Brenda Usilton by email or fax (301) 415-3502. If you have any questions regarding the form contact Brenda Usilton at Brenda.Usilton@nrc.gov or 301-415- 2348. Cellular phones and similar devices with audible capability should be disabled while classes are in session. Normal office/business attire is appropriate for students attending training. Individuals should make a reservation at one of the following hotels. The cost of a taxi from the airport is around \$35.00-\$50.00 Canada. It takes approximately 30 minutes to travel from the CIC to Dorval Airport.

Room reservations can be made at the Sheraton Laval Hotel, 2440, Autoroute des Laurentides, Laval, Tel. 800-667-2440 or 450-687-2440. This hotel offers a special rate for MDS Nordion's guests: \$129.00 + 15% taxes CNS night. This is normally the preferred place to stay and overall best value. The hotel is located across from a shopping mall. Please make sure to ask for the MDS Nordion special rate when you call. Other local hotels are:

Hilton Laval****
2225, Autoroute des Laurentides
Laval
Tel. 800-363-7948
www.hilton-laval.com

Radisson Hotel Laval****
2900 boul. Le Carrefour
Laval
Tel. 800-333-3333
www.radisson.com/laval.ca

Comfort Inn***
2055 Autoroute des Laurentides
Laval
Tel. 800-267-3837
www.choicehotels.ca/cn331

ENCLOSURE 2

Irradiator Technology Course Schedule

DAY 1

Session 1
9:00-10:15

Introduction
-Welcome
-Preliminary tour of IR-147

10:15-10:30

COFFEE BREAK

Session 2
10:30-11:30

Industrial Irradiators
-Types
-Components
-Design principles
-Touchtime
-PLC

Session 3
11:30-12:00

Research Irradiators
-Types
-Design

12:00-1:00

LUNCH

Session 3
1:00-1:30

Research Irradiators (continued)
-Use
-Inspections (hands-on)

Session 4
1:30-2:30

Cobalt-60
-Cobalt-59
-Product of Co-60
-Transportation of Co-60
-Handling of Co-60

Session 5
2:30-3:15

Source Loading
-What every operator should know
-Handling tools
-Typical loading
-Source loading procedure

3:15-3:30

COFFEE BREAK

Session 6
3:30-5:00

Operation of Industrial Irradiators (Hands-on)
-Operating modes
-Sequence diagram
-PLC

DAY 2

Session 7
9:00 - 10:00
10:00-10:15
10:15-11:00
-Caution indicators

Safety Systems & Features
-Fault indicators
COFFEE BREAK
Safety Systems & Features (continued)

Session 8
11:00-12:00
12:00-1:00
1:00-2:00

-Safety features
-Hands-on review of safety systems
Walk-through Inspection (hands-on)
-A complete safety inspection is performed
LUNCH
Walk-through Inspection (hands-on) (continued)

		-A complete safety inspection is performed
Session 9		Irradiator Maintenance
2:00-3:15		-Control room organization
		-Equipment maintenance
		-Electrical/Mechanical
		-Safety checks
3:15-3:30		COFFEE BREAK
Session 10		Good Manufacturing Practices
3:30-5:00		-Standard Operating Procedures
		-Following product from receiving to shipping
DAY 3		
8:00		Leave Laval for Kanata
Session 11		Tour of a cobalt-60 product facility
All day	-	Storage pool
		-Hot cells
		-Encapsulation
		-Leak testing
		-F-168 container
		-Transportation
12:00-1:30		LUNCH
Session 12		Tour of a Molybdenum 90 Product Facility
1:30-3:00		-Guided tour of the MDS Nordion Molybdenum 90 product facility
3:00-6:00		-Return to Laval
DAY 4		
Session 13		Emergency Procedures
9:00-10:00		-Procedures as required by 10 CFR36
10:00-10:15		COFFEE BREAK
Session 14		Wipe test (Hands-on)
10:15-10:45		-A source rack wipe test is performed
Session 15		Radiation Safety Officer and Operator responsibilities
10:45-11:15		-Maintenance records
		-Irradiation log book
		-Visitor records
Session 16		Radiation Survey (hands-on)
11:15-12:15		-A radiation survey of biological shield is performed
12:15-1:15		LUNCH
Session 17		Incidents
1:15-2:00		-Incidents at irradiation facilities
Session 18		Dosimetry (hands-on)
2:00-3:15		-Types of dosimeters
		-Characteristics
		-Reading equipment
3:15-3:30		COFFEE BREAK
Session 19		Regulations
3:30-5:00		-USNRC regulations 10 CFR36

DAY 5

Session 19
8:15-9:15

Regulations (continued)

- Regulatory Guide 8-13
- Regulatory Guide 8-29
- IAEA guidelines
- ANSI standards

Session 20
9:15-9:45

Licensing

- USNRC Guide NUREG 1556 Vol. 6
- Security Update

9:45-10:00

COFFEE BREAK

Session 21
10:00-11:15

Audit

- Audit of radiation safety procedures, operational procedures and safety systems

Session 22
11:15-11:30

Review

- Discussion

Session 23
11:30-1:30

Examination

- Written test

Note:

All hands-on exercises are carried out using a full scale commercial irradiator and two research irradiators.

Dosimetry exercises are possible in our dosimetry laboratory which currently handles 7 (seven) of the most used dosimetry systems in the world.