



NORM/TENORM Radiation Safety Training

April 7, 2016

10 Professional Development Hours (PDH) available!

The Marcellus Shale Coalition (MSC) in conjunction with Dade Moeller and the MSC Water Resources and Waste Management Committee are pleased to offer a NORM/TENORM Radiation Safety Training. This training is being offered to all oil and gas industry stakeholders.

Naturally occurring radioactive material (NORM) is present in soils, rocks and other undisturbed materials. During drilling activities and ground surface movement, the shale rock formation is disrupted, ultimately altering the state of NORM. As a result, the NORM becomes technologically enhanced, or TENORM.

The Pennsylvania Department of Environmental Protection will provide a detailed overview of the revised NORM and TENORM regulations in Pennsylvania, including the impending §§78.58(d) and §§78a.58(d) requirement for operators processing fluids on-site to develop and construct a Radiation Action Plan. Additionally, the implementation of the new residual waste codes and landfill allocations will be highlighted. Dade Moeller will review radiation fundamentals and health effects, sampling and analysis protocols, framework for handling, disposal and transportation, and landfill monitoring and disposal requirements.

Instructor

Alan Fellman, Ph.D., C.H.P., *Manager, Commercial Consulting,* Dade Moeller

Dr. Fellman's career has focused on the areas of environmental radioactivity, radiation measurements, regulatory compliance, and education. He has extensive experience performing radiological site characterizations and risk assessments as well as assisting radioactive materials licensees with their radiation safety programs, including preparation of license applications, radiation safety manuals, standard operating procedures, and decommissioning funding plans. He performs regulatory compliance audits and presents training at the Dade Moeller Training Academy centers and client sites.

Agenda

7:30 – 8:00 am	Registration and Continental Breakfast
8:00 – 8:30 am	Introduction, Oil and Gas NORM Defined
8:30 – 10:00 am	Fundamentals of Radiation and Radioactivity
10:00 – 11:00 am	Health Effects From Exposure To Radiation
11:00 am – 12:00 pm	Properties of NORM - U, Th, Ra, Rn
12:00 – 1:00 pm	Lunch
1:00 – 2:00 pm	Regulations and PA Department of Environmental Protection Implementation of Chapter 78 Revisions and Landfill Allocations Michael G. Forbeck P.E., Environmental Program Manager, Bureau of Waste Management Pennsylvania Department of Environmental Protection Dwight A. Shearer P.E., Environmental Program Manager, Bureau of Radiation Protection Pennsylvania Department of Environmental Protection
2:00 – 3:00 pm	Principles of Radiation Safety
3:00 – 4:30 pm	Radiation Instruments and Measurements
4:30 – 5:00 pm	NORM/TENORM Waste Disposal

Register *(deadline: April 4)*

MSC Member:	\$200
MSC Member Group Rate*:	\$175
Non-Member:	\$250
Non-Member Group Rate*:	\$225
<i>(*Receive discounted rate per attendee when registering four or more attendees from one company)</i>	

To register: www.16normtenorm.eventbrite.com
Admission fees are non-refundable. Substitutions accepted.

Location

Hilton Garden Inn
1000 Corporate Drive
Canonsburg, PA 15317

A block of rooms has been reserved under the Marcellus Shale Coalition on a first-come, first-served basis. Please call (724) 743-5000 to make a reservation.

For more information and other training opportunities, please visit www.marcelluscoalition.org/get-involved or contact Sarah Braun, Events Manager, at sbraun@marcelluscoalition.org.