



EC INSC Project MC3.01/13

EC Contract N° NSI/2014/343-969

“Training and Tutoring for experts of the NRAs and their TSOs for developing or strengthening their regulatory and technical capabilities”

Training Course On

Management of Spent Fuel and Radioactive Waste

Mannheim - April 18 – 22, 2016

TÜV SÜD Energietechnik GmbH Baden-Württemberg
Dudenstr. 28, 68167 Mannheim, Germany



WorleyParsons
resources & energy

Course Objective

The training course will present and discuss the activity for management of spent fuel (SF) and radioactive waste (RW), related safety aspects, national and international safety standards.

It will cover the following topics: strategy and policy for RW and SF management, engineering and technological aspects, relevant international conventions and international standards; activities related to RW classification, treatment, conditioning, storage and final destination of radioactive waste (disposal options and institutional control), management of SF, dry and wet storage, SF reprocessing options, criticality safety and cooling functions, responsibilities related to RW and SF management and related regulatory control. Regulatory safety requirements, control and licensing aspects will be addressed too.

The trainees will achieve the knowledge by learning key aspects with respect to management of RW and SF and safety evaluation from the Nuclear Regulatory Body.

Practical applications are included in the program in two dedicated afternoons. Trainees evaluation is foreseen by the end of the course.

Course Daily Program

Monday April 18th 2016	
08.30 - 09.00	Registration
9.00 – 12.45	Welcome, Organizational aspects
	Training objective & programme - A. Madonna (ITER)
	EU infrastructure for Nuclear and Radiation Safety - A. Madonna (ITER)
	Regulator's role and functions - A. Madonna (ITER)
12.45 – 13.45	Introduction to European Union policy for SF & RW management - L. Holt (TÜV SÜD ET)
	Lunch
13.45 – 17.45	Type and generation of RW - M. Bauerfeind (TÜV SÜD ET)
	Classification of RW - R. Szücs (TÜV SÜD ET)
	Fuel cycle for NPP and SF management - M. Dilger (TÜV SÜD ET)

Tuesday April 19th 2016	
9.00 – 12.45	IAEA Safety Standards and Security Guidelines - F. Lietzmann (TÜV SÜD ET)
	EU requirements (Directives, ENSREG and WENRA) and best practices - M. Thieme (TÜV SÜD ET)
	National rules and regulations for SF & RW - J. Lucas, (TÜV SÜD ET)
12.45 – 13.45	Lunch
13.45 – 17.45	Hands-on training on dose calculation, shielding law, exposition time and measurement equipment - M. Thieme (TÜV SÜD ET)
	RW management facilities, and safety requirements, for sorting, treatment, conditioning - F. Engeser (TÜV SÜD ET)
	Safety Design basics for RW facilities and examples – F. Engeser (TÜV SÜD ET)

Wednesday April 20th 2016	
9.00 – 12.45	Technologies for handling and conditioning of radioactive waste and safety requirements - S. Kirsch (TÜV SÜD ET)
	Technologies for handling of spent fuel and current options for storage and related safety issues - M. Dilger (TÜV SÜD ET)
	Regulatory control and licensing in relation to decommissioning and waste management – H. Huger (TÜV SÜD ET)
12.45 – 13.45	Lunch
13.45 – 17.45	Practical Application
	<i>Comparison of regulatory control approach for different RW activities and SF. Application of IAEA guidelines.</i>

Thursday April 21st 2016	
9.00 – 12.45	Design basis and safety requirements for RW storage (LILW and HLW) - B. Schulz (TÜV SÜD ET)
	Disposal of radioactive waste (according to specific safety requirements of IAEA) - B. Schulz (TÜV SÜD ET)
	RW Repositories worldwide today - J. Lucas (TÜV SÜD ET)
12.45 – 13.45	Lunch
13.45 – 17.45	Practical Application
	<i>Comparison of different radioactive waste categories including their handling & treatment</i>

Friday April 22nd 2016	
9.00 – 12.45	Transportation of radioactive waste - F. Lietzmann (TÜV SÜD ET)
	Licensing of RW near surface disposal facility - N. Zeleznik (ITER)
	Public communication in relation to RW management and disposal - N. Zeleznik (ITER)
12.45 – 13.45	Lunch
13.45 – 17.45	<i>Course Summary – Course Coordinator (TÜV SÜD ET)</i>
	<i>Questionnaire – Course Coordinators (ITER - TÜV SÜD ET)</i>
	<i>Opinion from trainees – Course Coordinators (ITER - TÜV SÜD ET)</i>
	<i>Training Minutes – Course Coordinators (ITER - TÜV SÜD ET)</i>
	<i>Certificates awarding – Course Coordinators (ITER - TÜV SÜD ET)</i>