

## **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”**

### **Tutoring Module**

**“Radioactive Waste Management, related safety requirements and regulatory licensing issue”**

September 24<sup>th</sup> – November 16<sup>th</sup> , 2018  
c/o ITER - Rome

### **Tutoring Program**

**draft**

*September 2018*

## Objective and Program of tutoring module on:

### “Radioactive Waste Management, related safety requirements and regulatory licensing issue”

September 24<sup>th</sup> – November 16<sup>th</sup> , 2018

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**Introduction** : The tutoring activity has been conceived as “on the job training” at ITER in the area of safety requirements and licensing issue for RWM facilities and activities.

It will contribute to a real and practical “build-up” of knowledge allowing a sustainable transfer of approaches and methods.

The tutoring will last 8 weeks starting in September 2018 and will be held at ITER-consult head quarter.

The tutoring activity will be ensured by ITER senior experts with contribution from the Italian Nuclear Regulatory Authority ISPRA .

ITER-Consult will also ensure the administrative aspects.

**Tutoring objective:** Objective of the tutoring is to transfer know-how, practice and EU approach in the management of RW from the perspective of the nuclear regulatory authority and considering the TSO technical support functions

**Tutoring content:** The tutoring will include:

- familiarization with ITER Consult organization and related functions
- EU infrastructure for Nuclear and Radiation safety
- origin, type, classification of RW and overview of RWM facilities
- management of radioactive sources (RS) and related requirements

- familiarization with RW regulatory requirements and applicable standards.
- evaluation of Licensee submittals related to RW management facilities
- methods and calculation tools for safety assessment related to RW
- licensing process for RW management facilities
- regulatory licensing management capability and interfaces with applicant
- external technical support
- onsite visit to RWM facilities in Italy
- Preparation of tutoring report common to both tutees.

<b>Tutoring Program</b>
Welcome
Presentation of Tutoring program
Role and function of ITER- Consult expert organization
EU infrastructure for nuclear and radiation safety
Origin type and classification of RW
RW management facilities
Safety requirements for RW management facilities
Licensing process and safety analysis for RWM facilities
Safety Analysis Report (SAR) content
Environmental Impact Assessment of RWM Facilities
Regulatory review of SAR
Pre-disposal RWM facilities
Disposal facilities for RW
RW products (packages) and their Qualification
Waste Acceptance Criteria (WAC)
Radioactive sources in medical and industrial application

Management of Radioactive sources
Onsite visit to Italian NPP and RW facilities
RW from decommissioning activity
Practical application on “Review SAR for RW Storage Facility”
IAEA related safety requirements and guidance for Predisposal Management of Radioactive Waste.
Methodology for RWM safety assessment
Approach, models, independent calculations with regulatory view
Familiarization with use of codes (e.g. SAFRAN )
Discussion of specific cases
Transport of RW
SAR content for RW storage facility
Content of safety analysis for RW surface disposal facility
Waste acceptance criteria for RW disposal facility
Licensing process, regulatory review and inspection for surface disposal facility
Developing regulatory guidelines for RW management activity
Nuclear security aspects for RWM facilities and activities
Visit to research centre and laboratory on RW radiological characterization and measurements technology
<b>Preparation of Tutees’ Report</b>

At the end of the Tutoring Module the Tutees will elaborate a common Report containing the following:

- INTRODUCTION
- TUTORING OBJECTIVE
- TUTORING PROGRAM
- ACTIVITIES PERFORMED
- MAIN RESULTS
- CONCLUSIONS

The Tutees Report will be agreed with the tutoring coordinator.