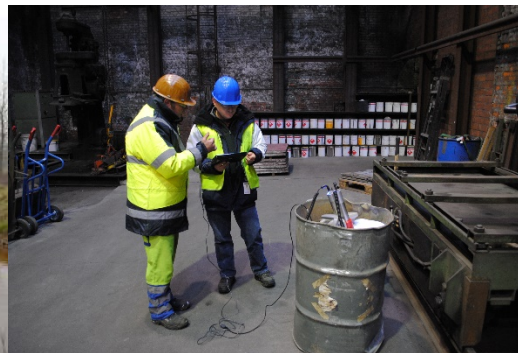




Training School on “NORM inventories”

In collaboration with IAEA ENVIRONET Project on Naturally Occurring Radioactive Materials (NORM)

26-30 November 2018





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Date: 26-30 November 2018

Location: UHasselt, Agoralaan building H, Diepenbeek, Belgium

Scope: The training school provides **training on how to make a NORM (Naturally Occurring Radioactive Material) inventory** for specific industrial sectors. Via case studies (**oil and gas, rare earth and metal processing industries, phosphate industry, ...**) from all over the world, practises on how to map NORM sites and the measurement strategy that could be used are demonstrated and discussed. **Field trips** are scheduled to **industrial and legacy sites** where NORM related problems are encountered and to the Harbour of Antwerp where containers are radiologically investigated and a detailed picture on different types of NORMs, entering Belgium, is obtained.

Target audience: **Bachelor (3e year), master, PhD students and young professionals from all over the world** that want to learn how to make a NORM inventory, when in a starting phase, for a given industrial sector no information on NORM is available at all. For students 2 ECTS credits can be granted. For the participants basic knowledge and/or experiences in the nuclear field are required. Around 24 participants can be allowed in the course. Participants (organised in groups) have to prepare a poster on NORM in a specific industrial sector from their country of origin (more information will follow).

Registration: Please send your **CV + short motivation letter** (max 1 page) + **recommendation letter from your home institute** to norm@uhasselt.be in order to apply for this training school. There is no entrance fee however **candidates need to apply at the latest on 05/08/2018**.

Reimbursement options for traveling or subsistence: A limited number of participants can obtain funding (for traveling or subsistence); this is possible for: (1) **participants from Africa, Asia or Latin America** or (2) **European (3e year) bachelor or master students in nuclear engineering**. Mention upon registration if you would like to apply for funding (for traveling or subsistence).





Preliminary program:

MONDAY 26/11/2018	TUESDAY 27/11/2018	WEDNESDAY 28/11/2018	THURSDAY 29/11/2018	FRIDAY 30/11/2018
<p>9h00 Welcome with coffee</p> <p>10h00 Case studies on inventory building</p> <ul style="list-style-type: none"> • Introduction • Phosphate industry - Belgium & Brazilian: strategies for inventory building 	<p>09h00 Case studies on inventory building</p> <ul style="list-style-type: none"> • Rare earth & metal processing - strategies for inventory building from France & Indonesia • Oil and gas industry - strategies for inventory building from Netherlands & US 	<p>08h30 FIELD Trip – Making the Belgian NORM inventory (guided by experts)</p> <ul style="list-style-type: none"> • NORM related Industrial and legacy sites from phosphate industry 	<p>09h00 FIELD Trip – Tracking NORM</p> <ul style="list-style-type: none"> • Radiological monitoring in harbor of Antwerp 	<p>09h00 Presentations of the students</p>
12h00 Lunch	12h00 Lunch	12h30 Lunch	12h00 Lunch	12h00 Lunch
<p>13h30 PRACTICAL Exercise</p> <ul style="list-style-type: none"> • Discussion of cases from countries of origin (including poster presentations) 	<p>13h30 PRACTICAL Exercises</p> <ul style="list-style-type: none"> • Sources of information • Measurement strategies <p>19h30 Dinner</p>	<p>14h00 Continuation of visits</p> <ul style="list-style-type: none"> • NORM related Industrial and legacy sites from phosphate industry <p>18h30 Social Event</p>	<p>13h30 Preparation of presentations by the students</p>	<p>13h30 Meeting of the jury + evaluation session</p> <p>15h30 Round table discussion: Evaluation of the course</p> <p>16h30 Farewell drink</p>