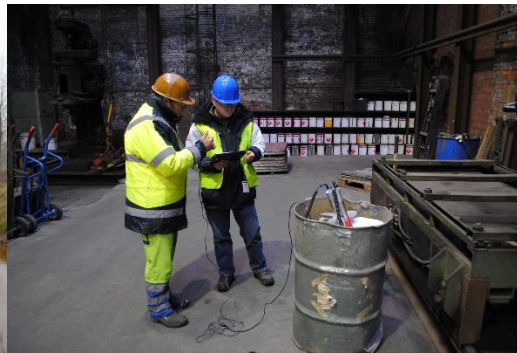
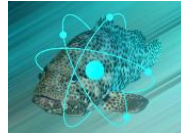


# Training School on “NORM inventories” – 2<sup>nd</sup> announcement

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

26-30 November 2018





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

**Date:** 26-30 November 2018

**Location:** UHasselt, Agoralaan building H, Diepenbeek, Belgium

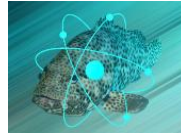
**Scope:** The training school provides **training on how to make a NORM (Naturally Occurring Radioactive Material) inventory** for specific industrial sectors. Via case studies (**oil and gas, rare earth and metal processing industries, phosphate industry, ...**) from all over the world, practises on 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](mailto: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 17/09/2018**.

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