

## MULTIPLE SMALL SIZE SUBSURFACE SOIL CONTAMINATIONS ON AN OPERATING SITE – TOO EARLY TO PREPARE THE FUTURE?

Thursday, 26 May 2016 10:25 (35 minutes)

In 2014, during the preparation of a dismantling, contamination in subsurface soil around a waste liquid effluent channel was discovered. This was a stark reminder of the necessity to define a clear policy for all on-site interventions. Presently, the SCK•CEN site is operational and its final end state is not defined. Nevertheless, the protection of the environment (with special attention to the relatively shallow groundwater) and workers carrying out fieldworks in potentially slightly contaminated area's needs to be guaranteed by using a risk based approach. Furthermore, we believe in the benefit of gathering all data's to have a solid basis for the problem definition of the remediation when the final end state will be defined.

A consolidated strategy has been established covering the following aspects:

☒ Registration of all radiological measurements performed on soils, in a centralized mapping tool in order to design a Conceptual Site Model.

☒ Implementation of dose impact studies for the present soil contamination and the potential ground water contamination.

☒ Enforcement of a strict procedure for the execution of fieldworks on the SCK•CEN site (e.g. Health Physic needs to confirm the absence of contamination before the start of any fieldwork).

☒ Guarantee the workers'safety during the execution of works in potentially contaminated soil. Some works in such areas cannot be avoided. Recently, two different operations took place in confirmed contaminated soil and a third intervention is foreseen in the beginning of 2016.

☒ Search for new/unexploited removal routes for contaminated soil.

☒ Evaluation of feasible decontamination methods.

The experience clearly shows that, at present, we need to:

☒ Avoid excavation when there is a very limited risk/impact for human and the environment. Excavation might not be optimal towards the ALARA principle since no effective removal route is currently available.

☒ Organize protective measures for workers and the environment.

### Country or International Organization

Belgium

### Type "YES" to confirm submission of required <br> Forms A and B via the official channels

YES

**Primary author:** Ms MAJKOWSKI, Isabelle (SCK-CEN)

**Co-authors:** Dr VERMEERSCH, Fernand (SCK-CEN); Dr NOYNAERT, Luc (SCK-CEN); Mr BODEN, Sven (SCK-CEN)

**Presenter:** Ms MAJKOWSKI, Isabelle (SCK-CEN)

**Session Classification:** Session 5B - 1

**Track Classification:** Case Studies and Waste Management in Environmental Remediation