

Document ID	Version 1.0	Status Final	Reg no	Page 1 (4)
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Reviewed by			Reviewed date	
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D5.13: Interim report on the project reviews

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1 Introduction

This document, “D5.13: Interim report on the project reviews” describes the reviews realised during 2012 in Work Package (WP) 5 “KBS-3V Emplacement tests in ONKALO (EMP)” of the FP7 EURATOM project LUCOEX - Large Underground Concept Experiments.

This document is connected to the LUCOEX WP5 Task 5.5 Integration and dissemination / Sub-task 5.5.1. Integration. Posiva Oy acts as the WP5 Leader.

The LUCOEX project will be implemented in collaboration with a consortium of international participants:

- SVENSK KÄRNBRÄNSLEHANTERING AB (“SKB”) (Sweden)
- AGENCE NATIONALE POUR LA GESTION DES DECHETS RADIOACTIFS (“ANDRA”) (France)
- NATIONALE GENOSSENSCHAFT FÜR DIE LAGERUNG RADIOAKTIVER ABFÄLLE (“Nagra”)(Switzerland)

2 Reviews during the year 2012

The WP5 Sub-task 5.5.1. Integration mentions that internal and external experts will be invited to perform reviews on the WP5 project plan, interim results, demonstrations and final report.

During 2012 the WP5 activities have been presented to the LUCOEX consortium more widely in connection with the Project Progress Meeting organized March 14th and September 26 - 27. Also WP5 has been presented to the LUCOEX Expert Group in the meeting arranged September 24 - 25 and to more widely in LUCOEX Midterm Workshop October 25 - 26.

The partners have been provided opportunities to provide feedback on the WP5 project during meetings and through email and telephone contacts.

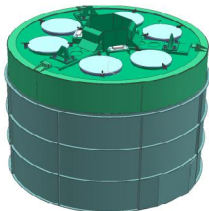
2.1 WP5 activities in 2012

The Finnish engineering office Insinööritoimisto Comatec Oy has made the design of the steel construction and automation system for installation machine and assisted during the tendering process of installation machine steel frame manufacturing. The design of quality control equipments and problem handling tools has been going on at the same time. Possible solving solutions for problem handling have been decided, as well as the basic idea for equipment. The purchasing of problem handling tools will be done 2013.

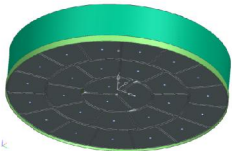
Konepaja Laaksonen Oy was chosen after a tendering process to manufacture the steel construction for the buffer and pellet installation machine. The work has started in July and in the end of 2012 all steel components have manufactured and painted. The assembling has started in the end of November and will be ready in the end of January 2013.



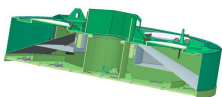
Picture 1. Buffer block installation machine



Picture 2. Container for block transportation.



Picture 3. Upper part of container act as a gripper to buffer blocks.



Picture 4. Cross-section of gripper

During October and November the tendering process of installation of electricity and automation component has been going on. As a result of the process, the work will be done by Elmont Oy.

The completeness of the buffer installation machine requires equipment for transporting the buffer blocks from the central tunnel to the installation machine. The design of the transportation shuttle has been done and the documents for tendering process are ready.

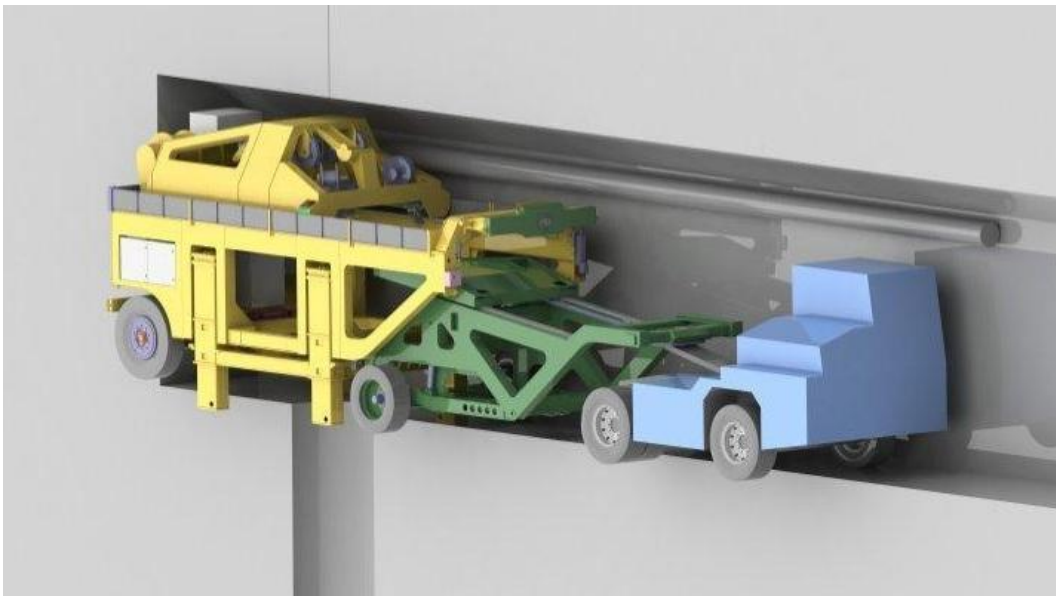
During 2012 the search for the place for the first phase demonstration has been going on. A final decision has not been yet taken. The second and third phase will be done in Onkalo in Olkiluoto.

3 Plans for the year 2013

During the year 2013, the WP5 main activities include the following:

- After manufacturing and finalizing of the buffer block installation machine steel frame, the installation of electricity and automation equipment will start and continue until the end of March.
- Manufacturing of the transportation shuttle will start after tendering process.
- Three phase installation demonstrations of buffer block and pellet with full scale blocks will be started in the spring. The first phase demonstrations will be performed in Olkiluoto or Äspö laboratory in Sweden. The second and third phase demonstrations will be done in Onkalo in Olkiluoto. The second phase demonstrations will be done with concrete blocks and the third phase with bentonite blocks.
- The demonstrating of quality control equipments will be done at the same time as the buffer block and pellet installation demonstrations.
- The demonstration of problem handling tools will be done, if possible, in same test areas and same time as other demonstrations.

Internal and external reviews will be realized as planned and in addition if special needs arise.



Picture 5 The installation of buffer blocks in ONKALO demonstration tunnel.