**Charge and Agenda for Preliminary Design Review of the Common Shielding Project, January 2019**

Committee members:

Masa Arai (chair), Fabien Rey, Sigrid Kozielski, Luca Zanini, Iain Sutton, Daniel Lyngh

Project team:

Ken Andersen, Zvonko Lazic, Senad Kudumovic, Phil Bentley

**Charge:**

The purpose of this Preliminary Design Review is to assess whether the design is sufficiently mature to proceed to the detailed design phase.

Specific questions that the committee should address are as follows:

1. Have system requirements been defined, and are they complete and adequate to ensure acceptable system performance?
2. Is the proposed design expected to meet the functional and performance requirements, and are interfaces properly identified and defined?
3. Have appropriate options and alternatives been considered in selecting the design approach? Are there further value engineering opportunities that should be considered?
4. Is the proposed design sufficiently mature to proceed to final design?
5. Have major project risks and safety hazards been appropriately identified, characterized, and mitigated?
6. Is the project plan drafted and is it compatible with the overall requirements of the NSS project? Are schedule and cost estimates where relevant reasonable?

The committee is asked to evaluate the submitted documents and presentations along the criteria cited above and establish an overall recommendation on readiness to proceed

Comments and recommendations in each area should be separated into two categories, namely, those that need to be addressed prior to proceeding to final/detailed design, and those that should be addressed in due course during the final design process.

**Agenda**

Thursday 24th January, Conference Room Brightness, ESS site

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| 09:00 – 09:30 | Introduction, Overview and Charge | K. Andersen / Z. Lazic |
| 09:30 – 10:00 | Neutronics | P. Bentley |
| 10:00 – 10:30 | Coffee |  |
| 10:30 – 10:50 | Engineering | S. Kudumovic |
| 10:50 – 11:00 | Installation | A. Bianchi |
| 11:00 – 11:20 | Operations and Alignment | K Andersen |
| 11:20 – 12:00 | Discussion |  |
| 12:00 – 13:00 | Lunch |  |
| 13:00 – 14:30 | Discussion |  |
| 14:30 – 15:00 | Coffee Break |  |
| 15:00 – 16:30 | Closed session |  |
| 16:30 – 17:00 | Close-out |  |
| 17:00 | Close |  |

The time slots for presentations indicate the expected length of the presentations themselves, not including time for discussion.

**Documents submitted:**

ESS-0484542 Preliminary Design Report, Senad Kudumovic

ESS-0510203 Guide Shielding Sketch D01/D03, Senad Kudumovic

ESS-0510213 Guide Shielding Sketch E02, Senad Kudumovic

ESS-0510214 Chopper Pit Sketch, Senad Kudumovic

ESS-0513197 Risk analysis, Ken Andersen

ESS-0511498 Report on the Common Shielding Activities: Beam Guide Shielding within the LOS - Tsito Randriamalala

ESS-0511500 Shielding prompt gamma at the ESS long instruments, Rodion Kolevatov

ESS-0511504 Monte Carlo simulations for the neutron guide shielding of the ODIN instrument at ESS, Florian Grünauer

ESS-0511506 Simulating BIFROST instrument to 35 meters from source. Dose rate in D03 due to fast neutrons from target, Rodion Kolevatov

ESS-0511508 Summary Slides of Standard Shielding DREAM and TREX PHITS Simulations, Tsito Randriamalala

ESS-0511510 Simulating HEIMDAL beamline (thermal guide) at the ESS. Dose rates in D03, Rodion Kolevatov

ESS-0472974 System Requirement Specification for the Common Shielding System, Mark Ridgley

ESS-0473697 System Verification Plan for the Common Shielding System, Mark Ridgley