Design Review Document

# Meeting Organization:

**Date**: 4 July 2019

**Type of review**: Critical Design Review

**System or component under review**: Proton Beam Window Port Block & Vessel

**ESS Target Lead for system**: Anders Andersson

**Review committee members**:

Ulf Odén (chair)

Mattias Wilborgsson

Tobias Lexholm

Cecilia Lowe

Laurence Page

**Charge to Committee:**

The purpose of this Design Review is to assess whether the proposed design of the PBW PB & Vessel is mature enough to be close to finalization of the detail design phase, in line with ESS-0037005.

Specific questions that the committee should address are provided below:

1) Are system and interface requirements properly defined, complete and up to date?

2) Have hazards, both radiological and conventional, been properly considered, analyzed, and appropriately addressed?

3) Do the System Design Description documents and related drawings adequately describe the design to the degree needed for procurement and manufacturing?

4) Does the design satisfy all functional, performance and safety requirements?

5) Is the technical solution, material specifications and the scoping documents complete and do they provide sufficient technical basis for potential suppliers to offer and deliver the Connection Ring that satisfies the stated requirements?

6) Is the project plan reasonable?

The committee is asked to compile a set of comments and recommendations along the lines of enquiry stated above. Comments and recommendations 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.

# Committee Comments and Recommendations

**Summary**:

**Responses to specific charge items**:

1) Are system and interface requirements properly defined, complete and up to date?

2) Have hazards, both radiological and conventional, been properly considered, analyzed, and appropriately addressed?

3) Do the System Design Description documents and related drawings adequately describe the design to the degree needed for procurement and manufacturing?

4) Does the design satisfy all functional, performance and safety requirements?

5) Is the technical solution, material specifications and the scoping documents complete and do they provide sufficient technical basis for potential suppliers to offer and deliver the PBW Port Block & Vessel that satisfies the stated requirements?

6) Is the project plan reasonable?

# Detailed Comments and Recommendations

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| Comment/Recommendation | Category 1 or 2\* | Committee Member |
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\* Category 1 means that the design team should address this recommendation prior to proceeding to final/detailed design, and Category 2 means that the design team should address this recommendation in due course during the final design process).