TDR Status

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TDR Mission Statement

The ESS TDR is a technical document describing in comprehensive detail the integrated design of the facility to be built Lund, in southern Scandinavia.

The TDR does not address organisational matters, nor governance matters and less so financial matters, although these subjects are borne in mind in arriving at the scope of ESS and hence the specification of the facility.

The TDR is being produced together with a series of other documents that demonstrate the sound foundation of the project, to support and enable the anticipated tollgate decision to proceed to construction of the ESS.

ESS Design Reports

Conceptual Design Report, ESS-2012-001, Feb 6 2012

TDR "Draft 2", Oct 2 2012

Ch.	PDF chapters	Editor	Pages	Zip
0	Cover	Peggs		120812
1	Introduction	Carlile	7	CDR
2	Neutron Science	Kirstein	113	120928
3	Target Station	Lee	92	121002
4	Accelerator	Weisend	148	120928
5	Integrated Control System	Trahern (& Malovrh)	75	121001
6	Cryo Sys, Vac Sys, & Test Stands	Weisend	26	120926
7	Conventional Facilities	Hedén (& Hedin)	31	120928
8	Integration	Lanfranco	11	120927
9	Transition to Operations	Carlsson	17	120929
10	Upgradeability	Ainalem	12	120929
11	Safety	Jacobsson	10	120929
12	Radioactive Wastes & Emissions	Ene	21	121001
13	Conclusions	Carlile	1	Null
	TOTAL		572	

Ch 4 Table of Contents

ToC continued

In general ....

1. Draft 2 does not have an adequate bibliography. This is being developed, comprehensively, for Draft 3.

2. "Cross-referencing" and "cross-reviewing" between chapters is only partial, so far. This will be much improved – but not finished – by Draft 3.

3. Draft 2 has not been "word-smithed" for consistent and proper English usage. Nor has figure placement been optimized. Table formatting is mainly consistent. A complete job on these (important) cosmetic issues is only expected by Draft 4.

4. Format consistency has not yet been applied to figures, in particular not to plots. **(DISCUSS)**

By chapter ...

	Title	Page count
1	**Introduction**	7
2	**Neutron Science**	113

All sections are in place. 2.2 “An Instrument Suite for the ESS” describes 22 instruments, in a format that could be extracted as a stand-alone document.

3	**Target Station**	120

Most sections are in place. Sub-sections 3.4.2 “Gaseous cooling systems”, 3.4.3 “Water cooling systems”, and 3.6.1 “Water-cooled rotating tungsten target” will be ready for Draft 3.

4	**Accelerator**	148

All sections are in place. Several of the figures need updating to be consistent with the planned October release of the BLED databases describing the ESS layout baseline.

5	**Integrated Control System**	76

All sections are in place. Some sections, eg 5.3 “Machine Protection System”, are evolving in parallel with preparations for the internal review. Several graphics need updating.

.... more chapters ....

6 **Cryogenics, Vacuum, & Test Stands** 26

All sections are in place. Section 6.7 “Test Stands” may evolve somewhat before Draft 3.

7 **Conventional Facilities** 31

All sections are preliminarily in place. The winner of the “architectural competition” will be decided on October 19 – this chapter will develop and expand significantly before Draft 4.

8 **Integration** 11

All sections are in place, and are awaiting review.

9 **Transition to Operations** 17

All sections are in place. Some graphics are missing. Significant evolution of the text is expected before Draft 3.

10 **Upgradeability** 12

Almost all sections are in place. A list is missing from section 10.1 “Introduction”. Text will be added to 10.3.4 “Irradiation ports” and 10.3.5 “Ultra-cold neutrons” for Draft 3.

... last chapters

11 **Safety** 10

All sections are in place. There is some overlap between the regulatory discussion in chapters 11 and 12.

12 **Radioactive Wastes & Emissions** 18

Almost all sections are in place. Additional text will be added to 12.6.4, 12.6.6 and 12.6.7 for Draft 3. There are some known bugs and formatting inconsistencies in the Tables.

13 **Conclusions** 0

This chapter will be in place by Draft 3.

The future is now

The **key dates** for TDR releases and reviews are:

Oct 1	Draft 2
Oct 11-12	TDR Internal Review, Lund.
Nov 1	Draft 3
Nov 14-15	TAC
Nov 29-30	SAC
Dec 3	Draft 4
Dec 31	TDR final release

TDR Internal Review (Oct 11 & 12)

http://indico.esss.lu.se/indico/conferenceDisplay.py?confId=41

Chaired by S. Näsström, assisted by B. Fredriksson.

Plus: D. Argyriou, C. Carlile, P. Carlsson, O. Kirstein, J. Lehander, Ö. Larsson, M. Lindroos, F. Mezei, S. Peggs & K. Möller.

The committee will deliver a written report to the Chapter Editors.

	Chapter	Editor	Reviewer	Supporting names
1	Introduction	Carlile	Fredriksson	Näström
2	Neutron Science	Kirstein (+Jackson)	Connatser	Ainalem, Linander, Lundgren, Zanini
3	Target Station	Lee	Danared	Darve, Molander, Shea, Weisend.
4	Accelerator	Weisend	Andersen	Köttig, Lanfranco, Parker, Svedin, Wang
5	Integrated Control Sys.	Trahern (+Malovrh)	A. Johansson	Jacobsson, Kirstein
6	Cryo, Vac, Test Stands	Weisend	Seviour	Darve, Jurns, Molloy
7	Conventional Facilities	Hedén (+Hedin)	Henry	Hees, Lindroos, Rådahl, Rathsman
8	Integration	Lanfranco	Duperrier	Ladd, Linander, Radahl
9	Transition to Operations	Carlsson	Weisend	Molloy, Nordt, Plewinski, Shea.
10	Upgradeability	Ainalem	Näström	Fredriksson, Plewinski, Trahern, Henry
11	Safety	Jacobsson	Plewinski	Darve, Linander
12	Rad. Wastes+Emissions	Ene	Carlsson	Hansson, Jacobsson, Zanini
13	Conclusions	Carlile	Fredriksson	Näström