TSS CDR2 – List of documents and associated status.

| **CHESS#** | **Title** | **Author** | **Reviewers** | **Approvers** | **Status: Preliminary, Review or Approved** |
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|  | **Radiation Safety Analysis Documentation** |  |  |  |  |
| 0041755 | ESS Guideline for Radiological Hazard Analysis | Linda Coney TD | Francois Javier ESH  Per Nilsson TD | Peter Jacobsson ESH | Rev5 in Review(Apr19)  Released Rev 4  Feb 2017 |
| 0037525 | Hazard Analysis: Target wheel and helium cooling system | Jan Espen Presteng TD | Jens Harborn TD  Kristoffer Sjögreen TD | Ulf Odén TD | In revision  Released Rev 2  Apr 2016 |
| 0050077 | An overview of Target Station Radiological Hazard Analysis documentation | Piotr Slawik TD | Victor Lindqvist TD | Linda Coney TD | Released Rev 4  Feb 2019 |
| 0092293 | Description of the bounding target loss of cooling accident  (AA3 for EPZ) | Kristoffer Sjögreen TD | Ulf Oden TD  Per Persson ESH  Linda Coney TD | Mark Anthony TD | Released Rev 2  Mar 2018 |
| 0050081 | AA1 – Accident Analysis Report – Public: Target wheel rotation stop during beam on Target | Kristoffer Sjögreen TD | Ulf Oden TD  Thomas Hansson ESH  Riccardo Bevilaqua ESH  Manorma Kumar ESH  Jaime Arriagada TD  Linda Coney TD | Mark Anthony TD | Released Rev 4  Apr 2019 |
| 0063901 | AA2 – Accident Analysis Report - Public: Proton Beam events on Target and Proton Beam Window | Kristoffer Sjögreen TD | Ulf Oden TD  Thomas Hansson ESH  Riccardo Bevilaqua ESH  Manorma Kumar ESH  Per Nilsson TD  Linda Coney TD | Mark Anthony TD | Rev 2 is in progress  Released Rev 1  Feb 2017 |
| 0051595 | AA3 – Accident Analysis Report – Public: Loss of target wheel cooling during beam on target | Kristoffer Sjögreen TD | Ulf Oden TD  Thomas Hansson ESH  Riccardo Bevilaqua ESH  Manorma Kumar ESH  Jaime Arriagada TD  Linda Coney TD | Mark Anthony TD | Rev 4 in Review  Release in Apr 2019  Released Rev 3  Feb 2017 |
| 0053147 | AA14 – Accident Analysis Report – Public: Earthquake | Rikard Linander TD | Jaime Arriagada TD  Linda Coney TD Riccardo Bevilaqua ESH  Manorma Kumar ESH  Peter Jacobsson ESH | Mark Anthony TD | Released Rev 2  Mar 2019 |
| 0061641 | Safety Functions and DiD in the Target Station | Per Nilsson TD – owner  Per-Olov Larsson TD - author | Per Nilsson TD  Francois Javier ESH  Rikard Linander TD | Mark Anthony TD | Rev 2 in Review  Released Rev 2  Mar 2017 |
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|  | **ESS Classification Documentation** |  |  |  |  |
| 0016468 | ESS rule for identification and classification of safety important components | Francois Javier ESH | Thomas Hansson ESH | Ralf Trant ESH&Q  Roland Garoby  Machine Dir. | Released Rev 7  Oct 2018 |
| 0054158 | ESS rules for radiation safety classification of Electrical and Instrumentation & Control equipment including design and quality requirements | Mikael Olsson TD | Thomas Hansson ESH  Linda Coney TD  Stuart Birch ICS  Jonas Widing EIS | Ralf Trant ESH&Q  Roland Garoby  Machine Dir. | Released Rev 3  Mar 2019 |
| 0033258 | ESS Rules for Radiation Safety Classification of Mechanical Equipment | Per Nilsson TD | Cecilia Lowe QA  Thomas Hansson ESH  Rikard Linander TD  Francois Javier TS | Ralf Trant ESH&Q  Roland Garoby Machine Directorate | Released Rev 4  Mar 2019 |
| 0454232 | Categorization of radiation safety functions related to events internal to the monolith | Rikard Linander TD | Linda Coney TD  Thomas Hansson ESH | Mark Anthony TD | Released Rev 2  Dec 2018  Rev 3 is in progress |
| 0454234 | Categorization of radiation safety functions related to events in the target utility systems | Rikard Linander TD | Linda Coney TD  Thomas Hansson ESH | Mark Anthony TD | Released Rev 1  Jan 2019 |
| 0454235 | Categorization of radiation safety functions related to tuning beam dump events | Rikard Linander TD | Linda Coney TD  Thomas Hansson ESH | Mark Anthony TD | Released Rev 1  Dec 2018 |
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|  | **ESS IT Security Documentation** |  |  |  |  |
| 0239945 | ESS Rules for IT security for I&C systems with significant influence on radiation safety | Henrik Carling ICS | Linda Coney TSS  Ola Ingemansson TSS | Ralf Trant ESH&Q | Released Rev 2  Apr 2018 |
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|  | **Qualification Documentation** |  |  |  |  |
| 0185838 | ESS Procedure for Qualifying Electrical and I&C Components | Ylva Smedbäck EIS | Mikael Olsson TD  Ola Ingemansson TD  Jonas Widing EIS  Stefan Arvidsson QA | Mattias Skafar Q | Released  Sept 2018 |
| 0328435 | Template: Technical Specification – Requirement Specification: Electrical Equipment | Joakim Meyer |  |  | Released  June 2018 |
| 0307581 | Guideline how to fill in Technical Specification | Stefan Arvidsson Q | Jonas Widing EIS  Ola Ingemansson TD  Mikael Olsson TD | Mattias Skafar Q | Released Sept 2018 |
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|  | **TSS Documentation** |  |  |  |  |
| 0037596 | TSS Concept Specification | Atefeh Sadeghzadeh TD | Thomas Hansson ESH  Mikael Olsson TD | Linda Coney TD | Released Rev 2  Feb 2017 |
| 0002776 | TSS System Requirements Specification | Mikael Olsson TD | Ulf Oden TD  Thomas Hansson ESH  Sara Ghatnekar-Nilsson TD  Linda Coney TD | Mark Anthony TD | Released Rev 5  Jan 2019 |
| 0218018 | TSS classification report | Mikael Olsson TD | Thomas Hansson ESH  Rikard Linander TD  Linda Coney TD | Mark Anthony TD | Released Rev 1  Mar 2019 |
| 0287373 | Postulated TSS limits including timing | Per Nilsson TD | Emil Lundh TD  Kristoffer Sjögreen TD  Jens Harborn TD  Mikael Olsson TD | Linda Coney TD | Released Rev 1  Dec 2018 |
| 0045067 | TSS System Architecture Specification | Mikael Olsson TD | Ola Ingemansson TD  Anders Malm TD  Thomas Hansson ESH | Linda Coney TD | Rev 5 in Review  Released Rev 4  June 2018 |
| 0022915 | ICD-R Target Wheel, Drive and Shaft – Target Safety System | Kristoffer Sjögreen TD-Wheel | Ola Ingemansson TD-TSS | Linda Coney TD-TSS  Ulf Oden TD-Wheel | Released Rev 2  Aug 2018 |
| 0016380 | ICD-R Helium Cooling System (1010) – TSS | Jens Harborn TD-Helium Sys | Ola Ingemansson TSS  Tatiana Adamikova InKind Rez | Linda Coney TSS  Ulf Oden TD-Helium Sys | Released Rev 3  Dec 2018 |
| 0032009 | ICD-R TSS – Covers, Penetrations and Monolith Vessel | Anders Andersson TD | Ola Ingemansson TSS  Marcelo Juni Ferreira – ESS vacuum | Sara Ghatnekar Nilsson TD-Monolith  Linda Coney TSS | Released Rev 3  Mar 2019 |
| 0198545 | ICD-R TE (Target Electrical) – TSS | Rico Andersson TD-TE | Anders Malm TSS  Mikael Olsson TSS  Simon Strand TD-TE | Linda Coney TSS  Håkan Carlsson TD-TE | Released Rev 2  Dec 2018 |
| 0030063 | ICD-R Target Safety System - Site Infrastructure | Mikael Olsson TD | Atefeh Sadeghzadeh TD  Lisa Arthursson CF | Linda Coney TD | Released Rev 2  Nov 2018 |
| 0030068 | ICD-R Target Safety System – Accelerator | Mikael Olsson TD-TSS | Anders Malm TD  Frithiof Jensen AD  Edgar Sargsyan AD  Lali Tchelidze AD  Anders Sunesson AD  Carlos Martins AD | Linda Coney TD  Håkan Danared AD | Released Rev 4  Oct 2018 |
| 0289420 | Response time to switch off the proton beam after the TSS has opened its contactors | Aurelien Ponton AD | Edgar Sargsyan AD  Lali Tchelidze AD  Anders Sunesson AD  Mikael Olsson TD | Linda Coney TD  Håkan Danared AD | Released Oct 2018 |
| 0288103 | Interface Control Document – Target Safety System Monitoring | Johannes Kazantzidis ICS | Michael Beck ICS  Mikael Olsson TD  Thilo Friedrich ICS | Karl Vestin ICS  Timo Korhonen ICS  Linda Coney TD | Released Oct 2018 |
| 0249257 | System Requirement Specification – Target Safety System Monitoring | Johannes Kazantzidis ICS | Michael Beck ICS  Mikael Olsson TD  Thilo Friedrich ICS | Timo Korhonen ICS  Karl Vestin ICS | Released Oct 2018 |
| 0249259 | TSS Monitoring System – Concept of Operation | Johannes Kazantzidis ICS | Michael Beck ICS  Mikael Olsson TD | Timo Korhonen ICS  Karl Vestin ICS | Released Oct 2018 |
| 0249255 | TSS Monitoring System – System Engineering Management Plan (SEMP) | Michael Beck ICS | Johannes Kazantzidis ICS  Thilo Friedrich ICS  Linda Coney TD | Timo Korhonen ICS  Karl Vestin ICS | Released Nov 2018 |
| 0321310 | Target Safety System Design Description  SDD-Sol TSS | Ola Ingemansson TD | Mikael Olsson TD  Anders Malm TD  Olof Jansson TD | Linda Coney TD | Released Rev 1  April 2019 |
| 0275671 | TSS Report of Failure Modes and Effects Analysis (FMEA)  Word document | Mikael Olsson TD | Ola Ingemansson TD  Victor Lindqvist for ESH | Linda Coney TD | Rev 2 in progress  Released Rev 1  June 2018 |
| 0047128 | TSS Failure Modes and Effects Analysis (FMEA)  analysis spreadsheet | Mikael Olsson TD | Ola Ingemansson TD  Victor Lindqvist for ESH | Linda Coney TD | Rev 5 in progress  Released Rev 4  June 2018 |
| 0085658 | Normal environmental condition of rooms with TSS equipment | Atefeh Sadeghzadeh TD | Esben Klinkby TD  Mikael Olsson TD  Ola Ingemansson TD | Linda Coney TD | Released Rev 2  Feb 2019 |
| 0052608 | TSS Probabilistic Safety Assessment | Atefeh Sadeghzadeh TD | Ola Ingemansson TD  Mikael Olsson TD | Linda Coney TD | Rev 1 in Review  April 2019 |
| 0048372 | TSS Verification and Validation plan | Atefeh Sadeghzadeh TD | Ola Ingemansson TD  Mikael Olsson TD  Anders Malm TD | Linda Coney TD | Rev 2 in Review    Released Feb 2016 |
| 0485264 | TSS Concept of Operation | Atefeh Sadeghzadeh TD | Mikael Olsson TD  Ola Ingemansson TD | Linda Coney TD | Released Rev 1  Feb 2019 |
| 0191808 | TSS Classification list | Anders Malm TD | Mikael Olsson TD  Francois Javier ESH  Ola Ingemansson TD | Linda Coney TD | Released Rev 1  June 2018  Rev 2 in progress |
| 0145268 | Target Safety Systems Configuration Management Plan | Atefeh Sadeghzadeh TD | Ola Ingemansson TD  Henrik Carling ICS | Frans Hermodsson EIS | Released Rev 2  Apr 2018 |
| 0322252 | TSS test report for fiber optical signal transmission system | Olof Janson TD | Mikael Olsson TD | Linda Coney TD | Released Rev 1  Feb 2019 |
| 0329458 | Test Report TSS Temperature Switch | Ola Ingemansson TD |  | Linda Coney TD | Preliminary |
| 0321293 | Test Report Flow Sensor | Ola Ingemansson TD |  | Linda Coney TD | Preliminary |
| 0329452 | Test Report Pressure Switch | Ola Ingemansson TD | Lars Rosberg | Linda Coney TD | Preliminary |
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|  | **Review Documentation** |  |  |  |  |
| 0124260 | Response to PDR review committee report TSS | Linda Coney TD | Atefeh Sadeghzadeh TD  Ola Ingemansson TD  Mikael Olsson TD | Mark Anthony TD | Released Dec 2017 |
| 0052797 | PDR Committee Report | Ulf Oden, Chair TD | Frank Kornegay – SNS, retired  Kelly Mahoney – SNS  Annika Nordt ICS  Ronny Sjöholm CF  Thomas Hansson ESH |  | Released March 2016 |
| 0338754 | Review report – Pre-CDR for the Target Safety System (TSS) | Peter Jacobsson ESH | Ulf Oden TD | Ralf Trant ESH | Released Rev 1  Oct 2018 |
| 0507607 | Review report – CDF1 for the Target Safety System (TSS) | Ulf Oden TD | Peter Jacobsson ESH  Stuart Birch ICS | Mark Anthony TD | Released Rev 1  Jan 2019 |
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