Overview of Safety and Compliance

=ESS.NSS.H01.LOKI

PRESENTED BY ANDREW JACKSON

2025-12-05

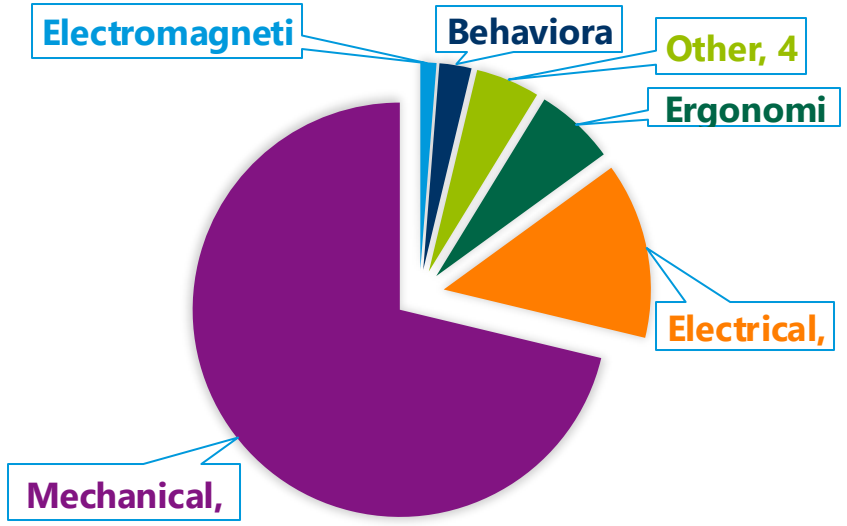
Instrument Hazard Analysis

ESS-1084771

The LoKI IHA identifies:

33 radiation hazards

88 conventional hazards, of which
- 41 are hazards in normal operation
- 47 are hazards in maintenance



The Instrument Hazard Analysis (IHA) identifies hazards and assesses risk before and after mitigation.
Equipment supplied with CE marking is supplied with operational instructions clearly stating intended use and hazards of operation and is not included in the IHA.

The IHA records any residual risks identified in equipment design risk assessments that require further mitigation.

The IHA includes risks that are not included in the design risk assessments and result from integration of the equipment or use of equipment outside it's intended use.

Review of IHA for SAR highlighted missing confirmation of implementation of mitigations.

In further reviewing this for iSRR, we discovered that the current released version does not include updates made by Judith before she went on leave.

New version will be released next week addressing deficiencies in current release – **no material changes to safety assessment**, only document quality issues.

Non-Conformity Reports

NC #	Description	Status
10567	Non compliance with ESS quality regulations General poor welding quality and lack of welding management system acc to ISO 3834.	Awaiting replacement of cooling skid/manifold. Work ongoing
10562	The load bearing limit in the LOKI hutch should not exceed 4kn/m2. However, the electrical cupboards have a total weight of 480kgs which exceeded the limit. Further studies have been performed and it resulted that the total weight on the roof can be accepted with this deviation. However, the actions to be taken is to ensure that no extra weight should be on top of the roof. Suggested actions: Put on signs at the roof rails stating no extra load or weight to be placed.	Sign placed on roof rails. NCR Closed
10500	Documentation is missing to ensure the equipment (Sample Area) is meeting the legal requirements. The items has already been installed. Before SAT the Instrument team should ensure ISIS either provides the documentation that is missing showing they are fulfilling the electrical/ machinery safety. Or they sign a Declaration of Incorporation of the parts ESS can´t themselves verify.	Motion safety implemented (main issue), need to determine how to close this NCR. In discussion with Q.
10482	Absence of CE-marking on equipment or an agreed plan for CE-marking to be conducted in situ and relevant documentation.	Documentation provide (CEDOC approved in CHESS ESS-5919458). Awaiting decision from Q and then signature by Science Director
10650	LOKI raised floor over the control hutch include a density of cables not compliant with Raised access floor fire analysis (ESS-5584373) See compliance analysis ESS-5912381	Modifications to raised floor made (installation of grids). Awaiting closure of NCR.

LoKI Safety and Compliance Summary

ESS-5937266

Summarises safety and compliance information for LoKI.

Written primarily for benefit of LSS Division Head – single point of reference.

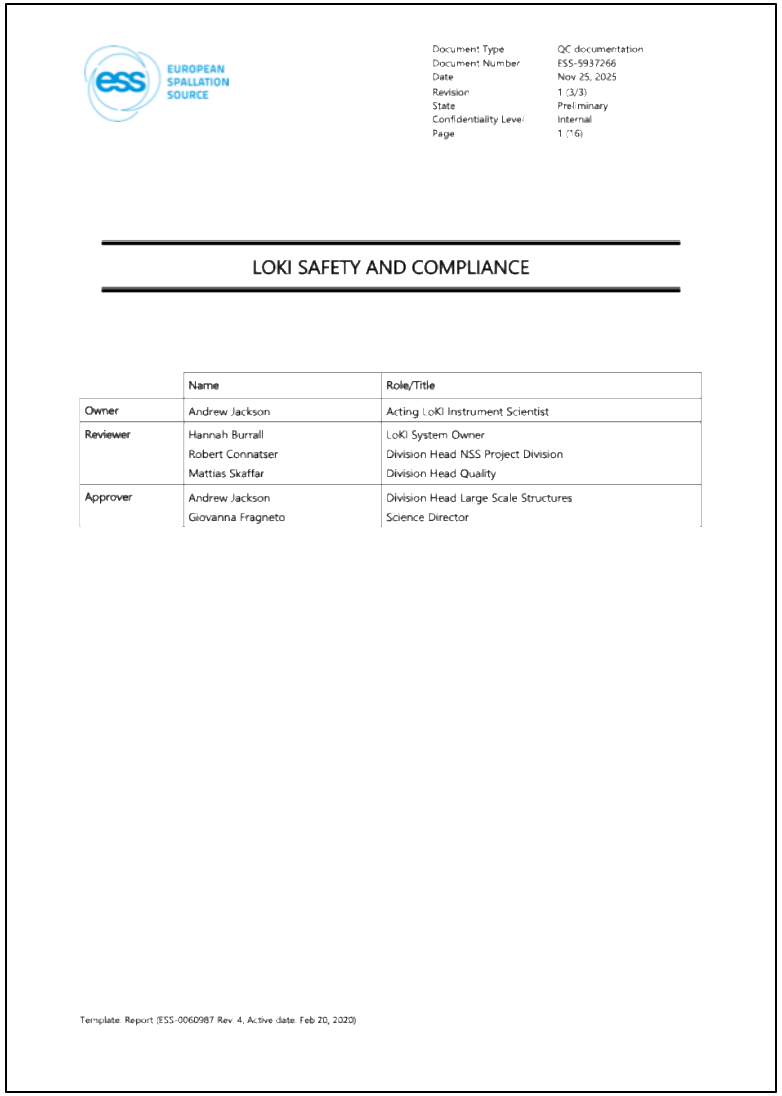
Addresses issues raised in e.g. SOFT SAR about how we know the compliance status of our systems.

Avoids heresay about status.

Enables Division Head and Science Director to have confidence in compliance of LoKI

Does not replace Q process – summarises inputs to CE/Compliance and gives System Owner's assessment of compliance.

Awaiting final documentation from Motion Safety and Pressurised Systems to be released. Will be released before 19th December.



EUROPEAN SPALLATION SOURCE

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LOKI SAFETY AND COMPLIANCE

	Name	Role/Title
Owner	Andrew Jackson	Acting LoKI Instrument Scientist
Reviewer	Hannah Burrall	LoKI System Owner
	Robert Connatser	Division Head NSS Project Division
	Mattias Skaffar	Division Head Quality
Approver	Andrew Jackson	Division Head Large Scale Structures
	Giovanna Fragneto	Science Director

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