LHCb upgrade installation workshop in view of the long shut-down 2 for 16-17 May

GENERAL SAFETY

Mark Hatch for LHCb TC team

Summary

- Overview of Safety
- Overall Work and Safety Coordination Plan (WSCP) for LHCb
- Status of Work Package Safety Documents
- Reminder on Safety Training
- Personal Safety Equipment

Safety Overview

Safety Overview – HSE - Safety Regulation SR-WS

CERN Safety rules > Home > Rules > By Types > Classification 2006 > Safety Regulations

Français | English

- CERN Safety Policy
- Classification 2006
  - **Safety Regulations**
  - Safety Plans and Procedures
  - General Safety Instructions
  - Specific Safety Instructions
- Classification prior to 2006
  - Safety Codes
  - Safety Instructions
  - Safety Notes
- Other documents of interest for Safety
  - Safety Forms
  - Safety Guidelines
  - Safety RP Procedures
  - Other documents of interest

Safety Regulations

Safety Regulations translate CERN's Safety policy into rules applicable to various activity fields of the Organization, for the purposes of occupational health and safety, environmental protection, safety of equipment and installations, and operational Safety.

See back-up slides for more information on Safety at CERN, HSE, safety policy and safety rules

SR-C - Chemical agents | - Chemical - | en fr

The purpose of this Safety Regulation is to define the minimum Safety requirements for the protection of persons from risks to their health and safety arising, or likely to arise, from the effects of hazardous chemical agents that are present at the workplace or used in any CERN activity.

It applies to any CERN activity involving hazardous chemical agents.

SR-M - Mechanical equipment (Obsolete)

We refer to this safety regulation for our work site documents 1, 2 and 3 – see later slides

SR-S - Smoking at CERN | - Safety_Health - | en fr

This Safety Regulation bans smoking in all enclosed or covered spaces on CERN premises as well as in all CERN vehicles. The prescriptions enforced by this Safety Regulation shall apply to all persons present on the CERN site.

SR-SO - Responsibilities and organisational structure in matters of Safety at CERN | - Organizational - | en fr

The purpose of this Safety Regulation is to define the responsibilities and organisational structure in matters of Safety at CERN.
It covers all persons participating in the activities of the Organization or present on its site, irrespective of their status.

SR-M - Mechanical equipment | - Mechanical - | en fr

The purpose of this Safety Regulation is to define the minimum Safety requirements applying to all mechanical equipment belonging to or hired by CERN or the collaborating institutions, used or intended for use at CERN, and to all associated activities.

SR-WS - Works and services | - Worksite - | en fr

The purpose of this Safety Regulation is to define the minimum Safety requirements for the execution of works and services on the CERN site, with the exception of project design.
This Safety Regulation shall be implemented as from 1st of June 2016.

Safety Overview – HSE – Safety Regulation SR-WS

2 MINIMUM SAFETY REQUIREMENTS RELATING TO WORKS AND SERVICES

Copy from SR-WS

2.1 General

The organic unit responsible for an operation, including the organic unit responsible for the coordination of a Technical Stop:

- precisely defines the perimeter of the operation;
- classifies the operation as Category 1 or Category 2, or as a Technical Stop;
- designates the Project Leader or the person in charge of the operation, in the case of Category 1 and Category 2 operations;
- makes the required declarations regarding building or civil-engineering operations to the competent authorities, in accordance with the applicable regulations of the Host States concerned and taking into account CERN's status;
- ensures that the Safety requirements defined in the applicable CERN Safety Rules are met for the duration of the operation.

The classification of an operation as Category 1, Category 2 or a Technical Stop as well as the main provisions regarding Safety shall be brought to the attention of future operating entities at the invitation to tender stage or at the establishment of the collaboration agreement relating to the operation.

This is done, our document 1.

A Work and Safety Coordination Plan (WSCP) is mandatory for Category 1 operations and Technical Stops and shall be:

- annexed to the invitation to tender or collaboration agreement relating to the operation, if applicable;
- brought to the attention of the operating entities in all other cases.

Every operation shall be announced internally before it starts, in accordance with the applicable CERN Safety Rules.

Overall Work & Safety Coordination Plan for LHCb

Overall Work Site Safety Plan for LHCb

UPGRADE LS2
The Large Hadron Collider beauty (LHCb) experiment

Version : 2.0
1/26/2017
EDMS: 1715689
Subsystem: Technical Coordination
Category: Safety - Installation

Work and Safety Coordination Plan (WSCP) LHCb upgrade LS2

Specifications and requirements

This 'Work and Safety Coordination Plan (WSCP)' describes the minimum safety requirements that are to be followed by all 'operating entities' (CERN groups, Institutes, contractors) during the upgrade work operations for LHCb during the long shut-down 2(LS2). This document is 1 of 3.

Keywords: LHCb upgrade, work site organization, work package leader, work package procedure, work package safety plan, safety coordinator, Technical Coordinator.

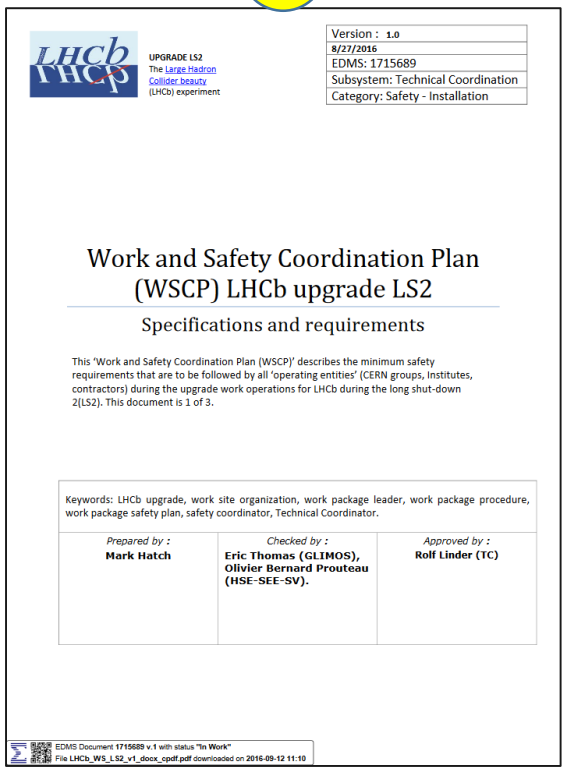
Prepared by :	*Checked by :*	*Approved by :*
Mark Hatch	**Eric Thomas (GLIMOS), Olivier Bernard Prouteau (HSE-SEE-SV).**	**Rolf Linder (TC)**

Contents

Dismantling-Installation-Procedure - Documents, QA, Organization, & Safety.

3 Documents that cover the overall **work plan/context**, the **work procedure** description followed by the related **safety plan**.

1



UPGRADE LS2
The Large Hadron Collider beauty (LHCb) experiment

Version : 1.0
8/27/2016
EDMS: 1715689
Subsystem: Technical Coordination
Category: Safety - Installation

Work and Safety Coordination Plan (WSCP) LHCb upgrade LS2

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Prepared by :	Checked by :	Approved by :
Mark Hatch	Eric Thomas (GLIMOS), Olivier Bernard Prouteau (HSE-SEE-SV).	Rolf Linder (TC)

EDMS Document 1715689 v.1 with status "In Work"
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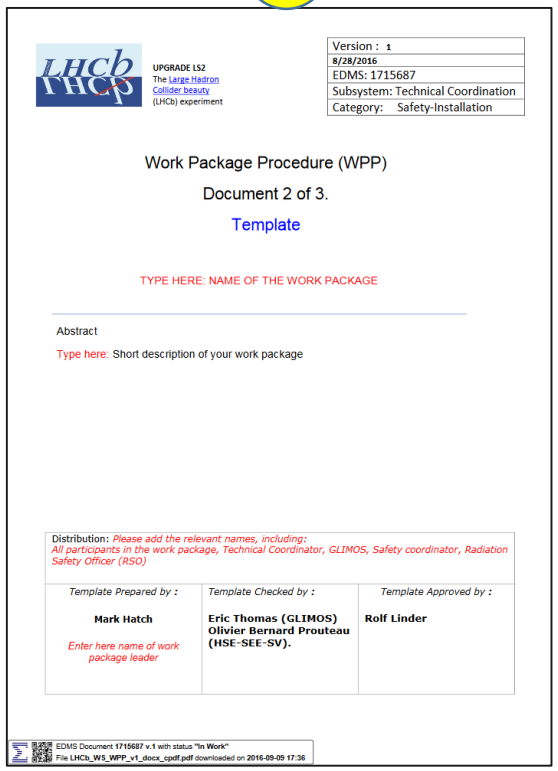

UPGRADE LS2
The Large Hadron Collider beauty (LHCb) experiment

Version : 1
8/28/2016
EDMS: 1715687
Subsystem: Technical Coordination
Category: Safety-Installation

Work Package Procedure (WPP)

Document 2 of 3.

Template

TYPE HERE: NAME OF THE WORK PACKAGE

Abstract

Type here: Short description of your work package

Distribution: *Please add the relevant names, including: All participants in the work package, Technical Coordinator, GLIMOS, Safety coordinator, Radiation Safety Officer (RSO)*

Template Prepared by :	Template Checked by :	Template Approved by :
Mark Hatch *Enter here name of work package leader*	Eric Thomas (GLIMOS) Olivier Bernard Prouteau (HSE-SEE-SV).	Rolf Linder

EDMS Document 1715687 v.1 with status "In Work"
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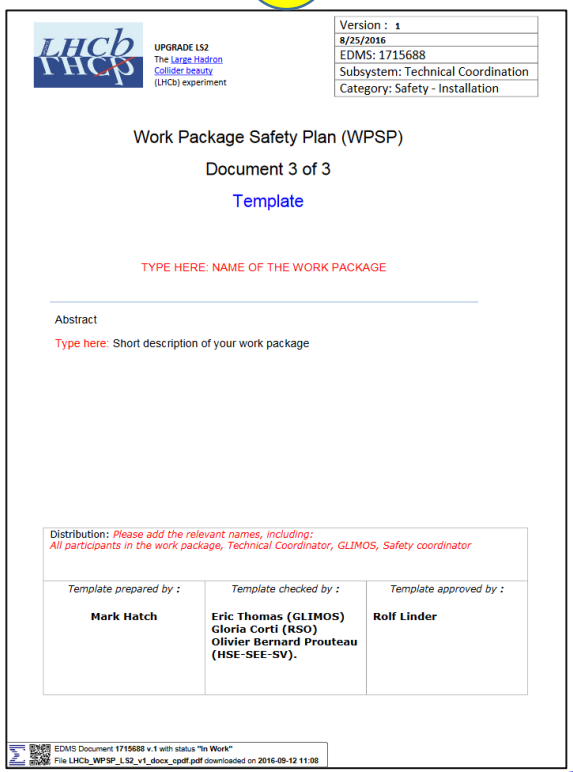


UPGRADE LS2
The Large Hadron Collider beauty (LHCb) experiment

Version : 1
8/25/2016
EDMS: 1715688
Subsystem: Technical Coordination
Category: Safety - Installation

Work Package Safety Plan (WPSP)

Document 3 of 3

Template

TYPE HERE: NAME OF THE WORK PACKAGE

Abstract

Type here: Short description of your work package

Distribution: *Please add the relevant names, including: All participants in the work package, Technical Coordinator, GLIMOS, Safety coordinator*

Template prepared by :	Template checked by :	Template approved by :
Mark Hatch	Eric Thomas (GLIMOS) Gloria Corti (RSO) Olivier Bernard Prouteau (HSE-SEE-SV).	Rolf Linder

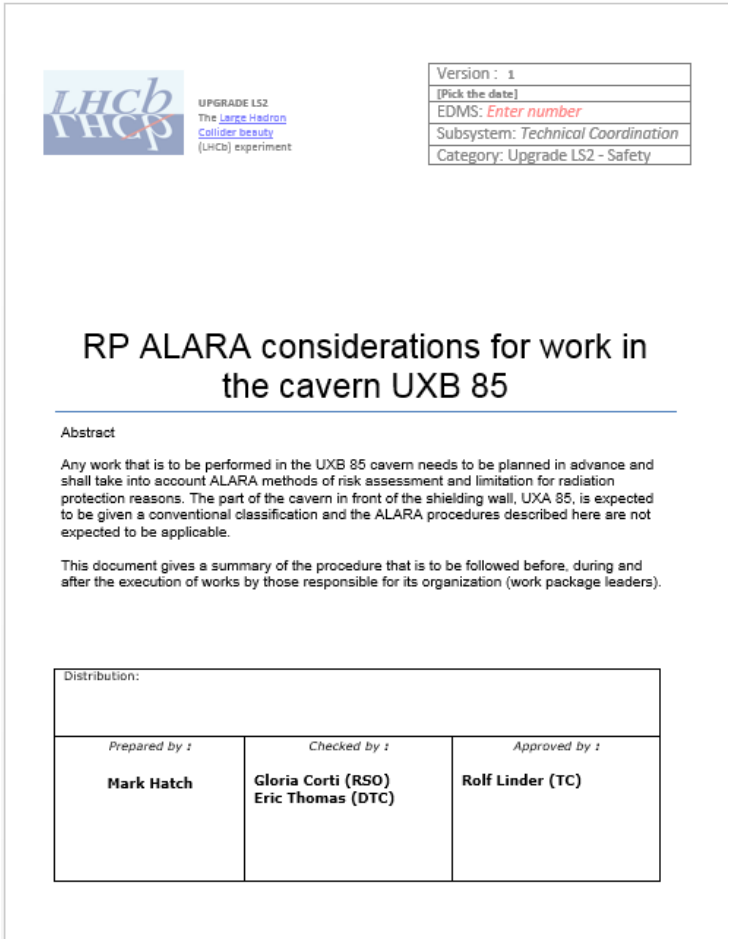
EDMS Document 1715688 v.1 with status "In Work"
File LHCb_WPSP_LS2_v1_docx_cpdf.pdf downloaded on 2016-09-12 11:08

The work procedure and safety plan are to be completed by the system work package leader.

A Work and Safety Coordination Plan (WSCP) is mandatory for Category 1 operations and Technical Stops

These documents were ready in January 2017 and presented at the LHCb Internal Upgrade Review

Dismantling-Installation-Procedure - Documents, QA, Organization, & Safety.



UPGRADE LS2
The Large Hadron Collider beauty (LHCb) experiment

Version : 1
[Pick the date]
EDMS: *Enter number*
Subsystem: *Technical Coordination*
Category: Upgrade LS2 - Safety

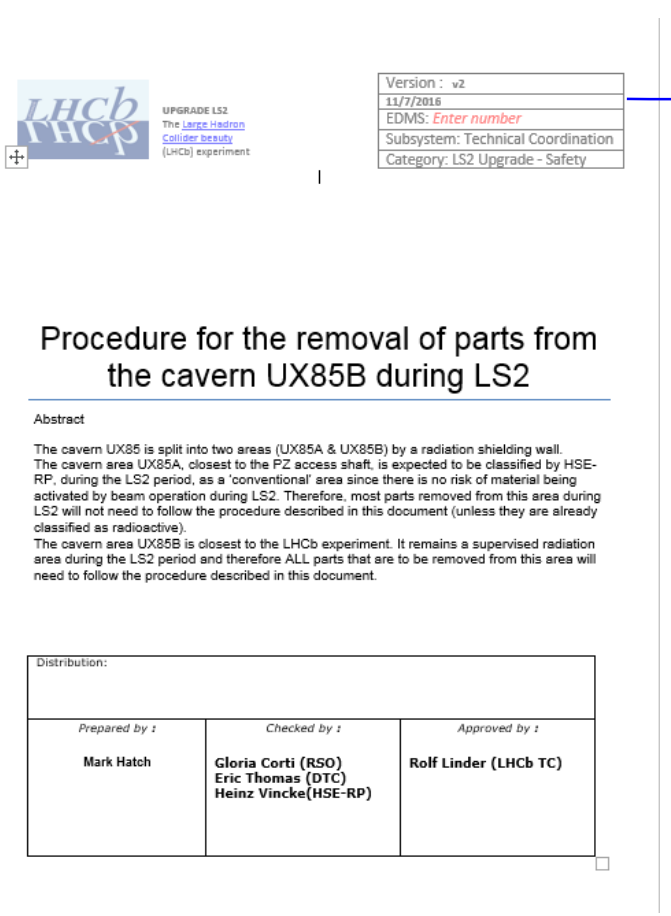
RP ALARA considerations for work in the cavern UXB 85

Abstract

Any work that is to be performed in the UXB 85 cavern needs to be planned in advance and shall take into account ALARA methods of risk assessment and limitation for radiation protection reasons. The part of the cavern in front of the shielding wall, UXA 85, is expected to be given a conventional classification and the ALARA procedures described here are not expected to be applicable.

This document gives a summary of the procedure that is to be followed before, during and after the execution of works by those responsible for its organization (work package leaders).

Distribution:		
Prepared by :	*Checked by :*	*Approved by :*
Mark Hatch	**Gloria Corti (RSO)** **Eric Thomas (DTC)**	**Rolf Linder (TC)**



UPGRADE LS2
The Large Hadron Collider beauty (LHCb) experiment

Version : v2
11/7/2016
EDMS: *Enter number*
Subsystem: Technical Coordination
Category: LS2 Upgrade - Safety

Procedure for the removal of parts from the cavern UX85B during LS2

Abstract

The cavern UX85 is split into two areas (UX85A & UX85B) by a radiation shielding wall.
The cavern area UX85A, closest to the PZ access shaft, is expected to be classified by HSE-RP, during the LS2 period, as a 'conventional' area since there is no risk of material being activated by beam operation during LS2. Therefore, most parts removed from this area during LS2 will not need to follow the procedure described in this document (unless they are already classified as radioactive).
The cavern area UX85B is closest to the LHCb experiment. It remains a supervised radiation area during the LS2 period and therefore ALL parts that are to be removed from this area will need to follow the procedure described in this document.

Distribution:		
Prepared by :	*Checked by :*	*Approved by :*
Mark Hatch	**Gloria Corti (RSO)** **Eric Thomas (DTC)** **Heinz Vincke(HSE-RP)**	**Rolf Linder (LHCb TC)**

In addition there are 2 documents, in work, that cover Radiation Protection during the LS2 period.

Why these work package documents ?:

- ★ ❑ Plan, Prepare & Organise
- ❑ Procedures agreement: (TC team & system)
- ★ ❑ Tooling: Identify and procure new tooling & refurbish existing tooling in time for the start of the work
- ★ ❑ Safety: To identify potential risks/hazards and identify measures that will be taken to minimise them and thereby also demonstrate a responsible attitude to internal or external authorities
- ❑ CAD studies: Verify the feasibility of procedures
- ❑ Resources: Identify the workers and their supervisors (project leader)
- ★ ❑ Training: Identify any specific training requirements (work at height. Nacelle,..)
- ★ ❑ Scheduling: TC to produce a detailed and coordinated work schedule and identify, in advance, the critical path and potential problem areas
- ★ ❑ Conformity: It is required by CERN HSE since June 2016

We have been able to cross-check the space requirements for the storage of parts – see later presentation on 'Storage facilities'.

We have been able to identify the tooling needs – see later presentation 'Handling and tools' by Augusto.

Safety document – target for this year.

Training needs– target for this year.

We have been able to cross-check the TC coordinated schedule for LS2.

The plan for 2017 = Work Package Procedures

Work Package Procedure (WPP) *first draft document - April 30th, 2017*

↓ LHCB TC INTERNAL REVIEWING PROCESS (FEW LHCB PERSON)

TC will go through the documents and will organize a meeting with the PL and WPL during the following weeks to discuss about the principal aspects of the activities.

↓ FEEDBACK TO THE PL AND WPL

Work Package Procedure (WPP) *second draft document - September 30th, 2017*

↓ EDMS OFFICIAL REVIEWING PROCESS (ALL THE PEOPLE DESIGNED FOR THE DOCUMENTS VALIDATION)

Work Package Procedure (WPP) *final version document - December 31th, 2017*

↓

Work Package Safety Plan (WPSP) for 2018.

This was the plan.
Largely positive results.
Some WPP's missing.

Status of Work Package Safety Documents

Status of Work Package Safety Plan (WPSP) Documents

- Set of emails sent out to work package leaders on the 2nd May by Augusto Sciuccati requesting that the work package safety plans be prepared and returned to LHCb, first draft, by end June 2018.
- An example work package safety plan was sent out with this email
- Need to plan ahead for safety training. LS2 will be a busy period, not just for LHCb, training courses will be in high demand. *The risk is that we may need to wait until courses have been completed before work can start as planned.*
- The WPP and WPSP documents will serve as input for the RP procedures (DIMR and Work and Dose Planning) – see next presentation by Matthias Karacson. These will all serve as input to the IMPACT.
- IMPACT is a process that MUST be completed before access can be authorised and the work can start.
- The PL, LEXGLIMOS, RSO, etc, are all included in the IMPACT approval process.

Work Package Leaders cannot escape this process !
Should ensure that the work is planned in advance to include safe methods of working.

Work Package Safety Plan - Example

UPGRADE LS2
The Large Hadron Collider beauty (LHCb) experiment

Version : 2
Date: 24 April 2018
EDMS:
Subsystem: Infrastructure
Category: LS2 upgrade

Removal of the cooling stations from UXA85

Work Package Safety Plan (WPSP)

Document 3 of 3.

Abstract

Cooling stations serving the experiment are located on a steel structure within UX85A. For the LHCb LS2 upgrade those that serve the VELO and the Silicon tracker (IT & TT) will no longer be needed and so can be removed in order to provide space for new equipment. Those that serve the RICH and OT will remain.

This safety document identifies the potential risks and describes the proposed mitigation measures to be employed. It complements the Work Package Procedure document (WPP) for the removal of these cooling stations.

Note: At this stage the Work Package Leader (WPL) has included the details for ALL activities. Later versions, in particular the one that is to be referred to in the IMPACT, must include the details as provided by the separate teams (Transport, EN/CV and NIKHEF). For example, it is for Transport to describe their activities including the identification of risks and safety measures.

Distribution:
EP/LBO: Matthias Karacson, Cedric Fournier

Prepared by :	***To Be Checked by :***	*In agreement with :*
Mark HATCH (EP/DT/EO)	**EP/LBO:** Eric Thomas, Gloria Corti, Augusto Sciuccati, Heinrich Schindler, Bernard Chadaj, Laurent Roy **HSE/SEE:** Kevin Boonroy **EN/ACE:** Cyrille Patrick Bedel **EN/CV:** Olivier Crespo, Florian Corbaz, **Transport:** Franck Daclin, Patrick Vallet **NIKHEF:** Wouter Hulsbergen	**R. Lindner EP/LBO**

Distribution list: ***lhcb-ls2 CERN E-Group***

Step 3a – *Upper level UXAC3: NIKHEF Removal of pipes and cables*

Activity	Risk	Preventive action
Removal of protective metal cladding around pipes.	*Cuts to hands.*	*Workers to wear suitable gloves (SCEM 50.43.20.BG). Cutting operation method to be defined, checked and approved by NIKHEF prior to start.*
Cutting and removal of pipes with portable cutters.	*Cuts to hands.*	*Workers to wear suitable gloves (SCEM 50.43.20.BG). . Cutting operation method to be defined, checked and approved by NIKHEF prior to start*
All Cutting operations	*Potential hot works/fire risk.*	*How will this be done? Is cutting/grinding needed/ If yes then a hot works procedure needs to be completed and followed by NIKHEF. Workers to wear safety glasses (SCEM 50.49.10) and other PPE as necessary during these operations.*
All Cutting operations	*Damage to eyes*	*Workers to wear safety glasses (SCEM 50.49.10) during cutting operations.*
Cutting of cables	*Electrification.*	*1) Ensure that the consignation has been performed. Request written confirmation from WPL prior to starting this work.* *2) Ensure that ALL workers involved in the cutting of cables have received appropriate 'habilitation electrique' training.*
Moving containers to ground level by transport.	*Risk to people moving below the load being transported.*	*) Restrict access around the drop zone with safety tape/barriers.* *2) Ensure that containers are of sufficient strength and have closed sides and bottoms to prevent pipes from falling out of the containers.*
Moving containers to the surface by transport.	*Care needed. Heavy objects (containers) moving against people*	*Transport to determine the procedure to ensure that the tools and the means to move the containers are adequate to minimise this risk.*

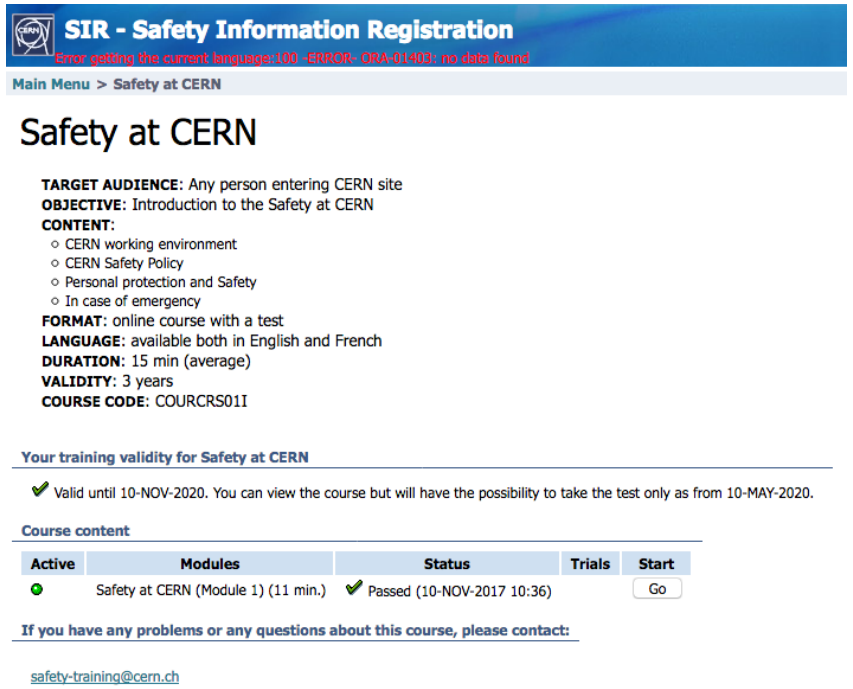
Refers to step in Work Package Procedure document (2)

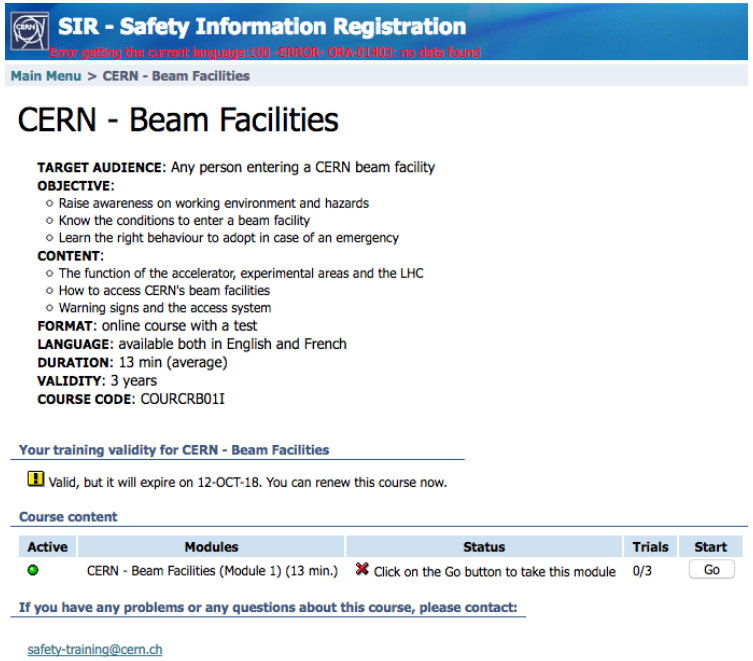
Reminder on Safety Training

CERN Safety Training – Training for Access

All 3 courses are:
- Mandatory for access to the UX85 cavern
- On-line (can be taken anywhere)

This course will be replaced by two courses:
- Common one for all 4 Large LHC experiments
- Specific one for LHCb





CERN Safety Training – Training for Dosimetry

Radiation protection training

Successfully attending a CERN-specific radiation protection course is obligatory prior to working in *Radiation Areas* and required for obtaining a personal dosimeter. The course type is linked to the radiological classification of the area where you will be working. To identify the radiological classification of the area where the work will be performed, please consult to the RAISIN database (https://cern.ch/raisin - CERN account and login required).

Training for work in *Supervised Radiation Areas*

Personnel working in *Supervised Radiation Areas* only have to follow the e-learning training course for *Supervised Radiation Areas*. It is mandatory to complete the course prior to working in these areas. The course is available online on SIR:

https://sir.cern.ch *"RP Training for CERN Supervised Radiation Areas"*

The course will take about 20 minutes. If you have a CERN account you can access the online course from your computer.

Please note that the e-learning training course does not allow you to work in a *Controlled Radiation Area* (see below).

Training for work in *Controlled Radiation Areas*

Personnel working in *Controlled Radiation Areas* have to follow a full-day course, consisting of theoretical and practical parts treating different radiation protection aspects (physical basics, biological effects, regulations and rules, radiation protection principles, protection measures). Taking the course for controlled radiation areas automatically entitles you to work in supervised radiation areas as well.

Persons who have a CERN account can subscribe to the course directly on the **training catalog web-site**:

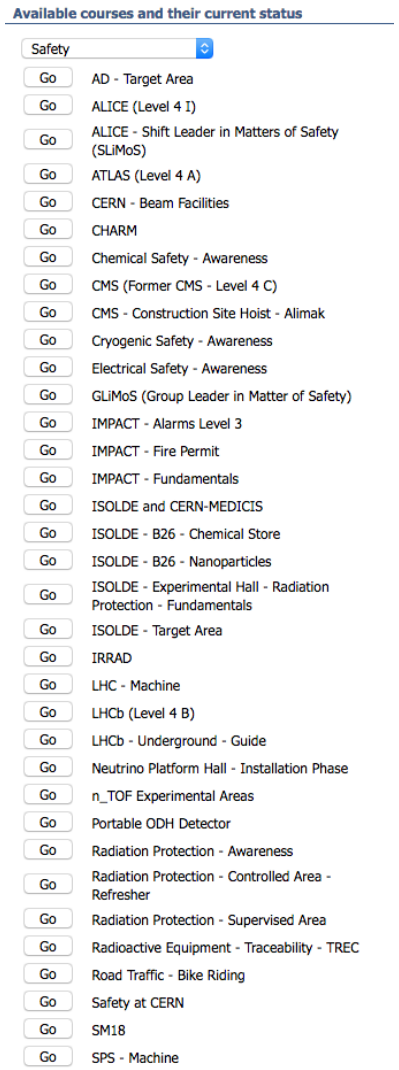
https://cta.cern.ch --> Safety / Radiation Protection / Radiation Protection – Controlled Area

If you do not have a CERN account, please contact your supervisor, CERN Safety Coordinator or Radiation Protection Expert (RPE) for advice. For all questions concerning the course organization and enrollment please call +41 22 76 79935 or contact via e-mail: safety-training@cern.ch.

Access to LHCb underground most areas in LS2.

Some areas may be classified as Controlled Radiation Areas HSE-RP & RSO to decide.

CERN Safety Training – Online safety courses



- These courses are online so can be taken anywhere
- The courses are usually of short duration <30 mins
- Most are mandatory and linked to the access of an area or as a pre-requirement to attend a classroom safety training course

CERN Safety Training – Classroom/Practical training

RADIATION
- If work is classified in a controlled area: Radiation protection controlled area (1 day)

ELECTRICAL – need further discussion with HSE
- Habilitation electrique (2-4 days) – Electrician
- Habilitation electrique (I day) – Non-Electrician

WORK AT HEIGHT
- If outside collective protection Working at height using a safety harness (1 day)
- If work above 8m Self Rescue Mask (2 hours)
- If using a 'nacelle' Mobile elevating working platform (2 days)

WORKSHOPS
- If someone wants to use a CERN workshop Workshop operator (4 hours)

Work package Leaders (Recommended not obligatory)
- Works and Services Supervisor - role and responsibilities (3 days)

(Recommended not obligatory)
- First aider (*not currently provided by CERN*)
- Fire extinguisher (2 hours)

** We need to plan ahead and inform HSE- safety training of our needs.
During LS2 period, due to the demand, it may well be difficult to meet the needs !!
Recommend that courses be taken in 2018

Personal Safety Equipment

CERN Personal Safety Equipment

CERN	INSTRUCTION DE SÉCURITÉ SAFETY INSTRUCTION	N° 7 Rev.

EDMS 335743

Published by : TIS/GS

Date of publication: 1993
Original: French

A little dated but good advice.

5 GENERAL PROVISIONS

The Division (Group) provides its staff beforehand with information on the areas and types of work where and for which individual protective equipment must be used.

Work Package Leader to identify the PPE when completing the Safety Plan document

The Division (Group) provides all its staff concerned with the individual protective equipment required. Each person must ensure that the equipment put at his disposal is in good condition (regular inspections and maintenance, repairs and replacements where necessary) and is properly used.

Work Package Leader to provide the PPE prior to start of work.

For hygiene reasons, individual protective equipment is essentially intended for personal use.

The approval of the TIS Commission must be obtained for any new individual protective equipment before it is used.

The Appendix gives an indicative, but not exhaustive, list of the individual protective equipment to be used at CERN.

CERN Personal Safety Equipment

Mandatory
For access to cavern.

Noise

Projections

Contact

Inhalation/Ingestion

Height/RP

APPENDIX

Indicative, but not exhaustive, list of the individual protective equipment for the operations/hazards requiring their use

Parts of the body to be protected	Protective equipment	Operation / hazard
Head	Helmet	• Building sites • Civil engineering and underground work • High or superimposed places of work • Dismantling or demolition work • Work in trenches, shafts and tunnels • Work under hoisting gear, cranes, etc.
Feet	Safety shoes (boots)	• Civil engineering work • Dismantling or demolition work • Transport and storage • Work with very hot or cold fluids (cryogenics) • Work with chemicals
Ears	Ear plugs Ear muffs	• Work station with a continuous noise > 85 dB/A • Work station with noise peaks > 125 dB/A
Eyes / face	Spectacles Goggles Arc-welding mask and helmet Full-face guards	• Welding, sanding, cutting, drilling • Machine-tools producing cuttings • Handling chemicals • Work with laser beams • U/v and i/r radiation
Hands / arms	Gloves	• Handling chemicals • Work with cryogenic fluids • Welding • Work on live electrical equipment • Pickling or work with edged/pointed tools
Respiratory	Anti-dust, gas and radioactive dust filtering equipment Air/oxygen breathing apparatus (oxybox, not for use in confined spaces)	• Work station with special atmospheric pollution (dust, smoke, aerosols, vapours, gases) • Confined spaces, work underground where there may be a lack of oxygen (smoke, leakage of cryogenic fluids, etc.)
Entire body	Safety harness Fall-guard Protective clothing	• Work in high places • Chemicals and radioactive substances, heat and cold • Welding and work with machine-tools

Equipment can be purchased through the CERN stores with a DAI (Contact Bernard Chadaj for advice).

- **50** SAFETY AND PROTECTIVE EQUIPMENT
  - 50.00 PHOTOGRAPHIC INDEX
  - **50.43** SHOES,GLOVES,HELMETS,APRONS,JACKETS,HATS,RAINCOATS
  - **50.44** JACKETS, TROUSERS, BOILER-SUITS, COTTON WORKING SMOCKS, TEE-SHIRT
  - **50.45** ELECTRICAL SECURITY CLOTHES
  - **50.46** RADIOPROTECTION EQUIPMENT
  - **50.48** AUDITORY ORGAN PROTECTION
  - **50.49** SPECTACLES, PROTECTION MASKS, BREATHING SET
  - **50.50** BARRIER CREAMS
  - **50.55** WARNING NOTICES AND LABELS, TAPE SIGNS
  - **50.60** FIRE ESTINGUISHERS
  - **50.61** ASHTRAY WALL
  - **50.64** SIGNS AND SAFETY EQUIPMENT
  - **50.70** SAFETY CONTAINERS
  - **50.90** EVACUATION CHAIRS

Conclusions

Conclusions

LHCb TC has:

- Planned in advance for LS2:
  - to try and be ready at the start of LS2 for the work that is to be done in a safe approved manner.
  - to try and respect the schedule
- Worked in close collaboration with CERN-HSE & HSE-RP and produced work procedures and safety document templates specifically for LS2.

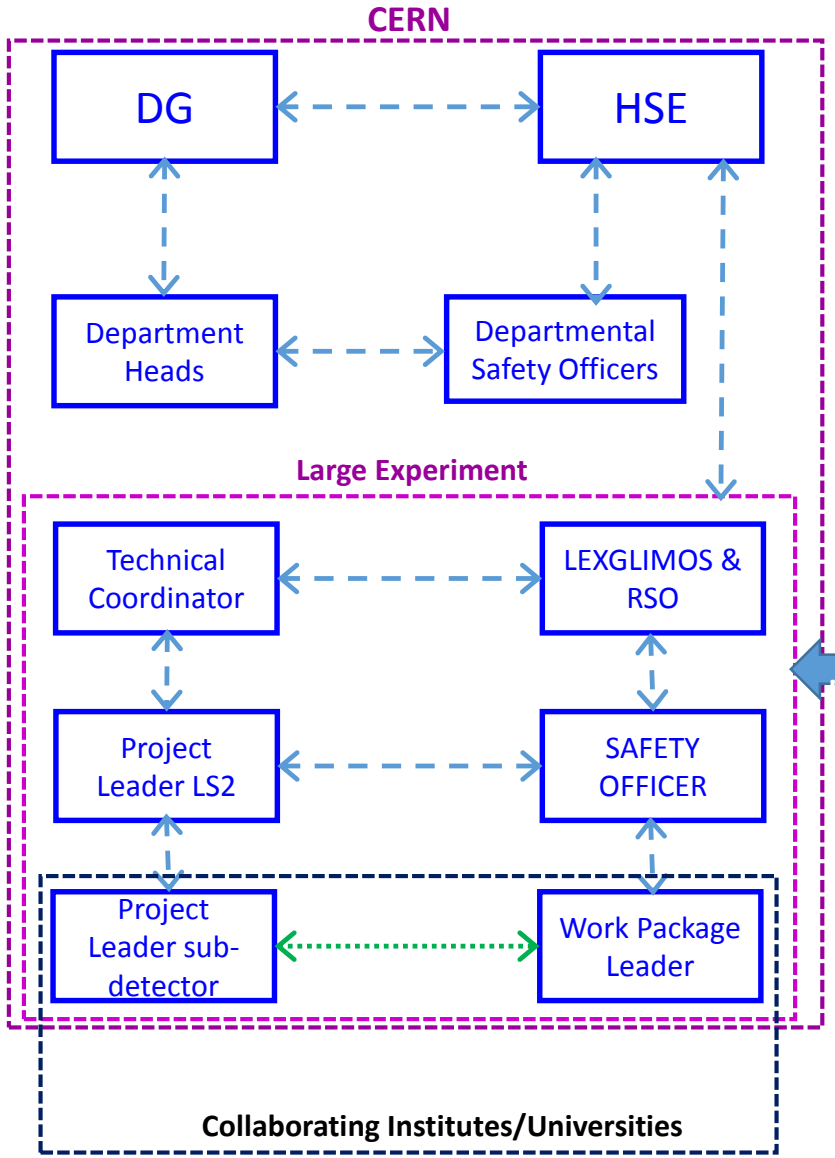
- In 2017 worked in close collaboration with LHCb experiment teams on the Work Procedure Documents. This has allowed us to identify:
  - Future Tooling requirements and have enough time to design/build the new tooling or refurbish existing tooling
  - Space requirements for storage (RP parts removed from cavern and cabling)
  - Schedule requirements for the coordinated TC schedule

In 2018 our aims:

- Collaborate with LHCb experiment teams:
  - On outstanding Work Package Procedure documents
  - On the Work Safety Plan documents, RP measures and PPE requirements
  - Develop the overall Safety training needs and inform HSE-Safety Training.

BACK-UP SLIDES

Safety Overview – How it works & who does what (MH diagram)



Responsible for everything at CERN.

Consults with and advises DG.
Safety Objectives. Safety Policy. Safety Rules.
Checks/Inspects for CONFORMITY for ALL activities at CERN.

Responsible for everything In the Department.

Consults with and advises Department Head..
Acts on safety: Objectives, rules compliance.

Responsible for everything Technical (incl. safety) in the experiment.

Consults with and advises Technical Coordinator.
Acts on safety: Objectives, rules compliance.

EN-ACE Operational Safety Adviser – Performs VIC's, advises PL.

Responsible for everything Technical (incl. safety) in the LS2 project.

Consults with and advises Project leader LS2.
Acts on safety: Objectives, rules compliance.

Spokesperson for the sub-detector.

Technically responsible (incl. safety) for the performance of the work package.
Role described in WSCP. Produces WPP, WPSP and ensures that the work follows agreed and approved procedures.
Acts on safety: Objectives, rules compliance.

Safety Overview - HSE

Sectors, departments and units

CERN's structure

Accelerator and Technology sector
- BE - Beams
- EN - Engineering
- TE - Technology
- DO - Directorate Office

Finance and Human Resources sector
- FAP - Finance and Administrative Processes
- HR - Human Resources
- IPT - Industry, Procurement & Knowledge Transfer
- SMB - Site Management and Buildings

Research and Computing sector
- EP - Experimental Physics
- IT - Information Technology
- TH - Theoretical Physics
- PRJ - Projects
- SIS - Scientific Information Service

International Relations sector
- Stakeholder Relations
- Education, Communications and Outreach

HSE - Occupational Health & Safety and Environmental Protection unit

DG - Director General units

CERN's governance

CERN's occupational Health & Safety and Environmental protection Unit

The Occupational Health & Safety and Environmental Protection (HSE) Unit is the driving force behind CERN's Safety Policy. A corporate and preventive Safety culture is promoted. In its role as the Organization's centre of competence in matters of Safety, the HSE Unit provides support to all parts of the Organization. Meeting CERN's Safety objectives requires the Unit to adopt a highly service oriented approach for both the radiological and conventional safety domains. Complementing its internal duties the HSE Unit coordinates CERN's HSE matters with the respective host states bodies. In case of emergency the CERN Fire Brigade is on permanent duty, complemented by the CERN Medical Service. Furthermore the CERN Medical Service takes care of all aspects of occupational health.

Safety Overview – HSE – SAFETY POLICY & RULES

Introduction to CERN Safety Rules

Safety is a priority of CERN's general policy.

CERN defines and implements a Safety Policy, The CERN Safety Policy[1] that sets out the general principles governing Safety at CERN.

As an intergovernmental organization, CERN further establishes its own Safety Rules as necessary for its functioning. In this process it takes into account the laws and regulations of the Host States (France and Switzerland), EU regulations and directives as well as international regulations, standards and directives. Where the Organization does not establish Safety Rules, the relevant laws and the regulations of the Host States apply on a territorial basis.

The responsibilities and organizational structure in matters of Safety at CERN are defined in the Safety Regulation SR-SO[1] and the documents (general and specific Safety instructions) that complement it and that constitute the SR-SO cluster.

Safety Overview - HSE

Introduction to CERN Safety Rules continued…….

Safety covers occupational health and safety, including radiation protection, the protection of the environment and the safe operation of CERN's installations, including radiation safety.

The CERN Safety Policy and the CERN Safety Rules cover all CERN activities and all persons participating therein or present on its site.

The Organization takes the necessary measures to ensure compliance with its Safety Policy and its Safety Rules.

Each person participating in the activities of the Organization or present on its site shall actively contribute to the implementation of the CERN Safety Policy through exemplary conduct and, in particular, compliance with the CERN Safety Rules, the CERN Safety Objectives and best practices, actively seeking information to minimise risks, avoiding dangerous situations for herself/himself and others and exercising the responsibilities assigned to her/him safely.