Safety Report

Hazard Identification Process in Areas

Bulding XXXX/X-xxx Meyrin/Prevessin/Point 5

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| Prepared by: | Checked by: | Approved by: |

Distribution to:

CMS Safety, Activity Responsible, TSO.

**History of changes**

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| --- | --- | --- | --- |
| Rev. | Date | Pages | Description of changes |
| 0.1 | 25/09/2024 | All | Creation of the document |
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# Contacts and Useful Links

* [CERN HSE](https://hse.cern/): Website
* [Contacts CMS Safety](https://cmssafety.web.cern.ch/who-are-we): group of CMS Safety referents
* [CMS RP](https://cmssafety.web.cern.ch/radiation-protection): CMS radiation protection information
* [CMS Safety Training and Access Requirements](https://cmssafety.web.cern.ch/training-and-access-requirements): all mandatory and recommended training.
* [CERN Learning Hub](https://lms.cern.ch/): for the catalogue and registration to available training courses
* [ADaMS](http://adams.web.cern.ch/adams/): for access requests
* [IMPACT](https://impact.cern.ch/impact/secure/): tool for the declaration of an activity
* [TREC](https://cmmsx.cern.ch/SSO/trec/): system for tracing potentially radioactive equipment
* [EDH SIT](https://edh.cern.ch/Document/SupplyChain/SIT): for Storage and/or internal transport requests
* [Cms-safety@cern.ch](mailto:Cms-safety@cern.ch): group of CMS Safety (TC, LEXGLIMOS, DLEXGLIMOS)
* [Cms-safety-team@cern.ch](mailto:Cms-safety-team@cern.ch): group of CMS Safety Team (LEXGLIMOS Office)
* [Cms-rso@cern.ch](mailto:Cms-rso@cern.ch): group of CMS Radiation Safety Officers (RSO, DRSO).

# Hazards definitions

*According to* [***ISO 45001***](https://www.iso.org/obp/ui/fr/#iso:std:iso:45001:ed-1:v1:en) *a hazard is defined as a source capable of causing injury and ill health. Hazards can include sources with the potential to cause harm or hazardous situations, or circumstances with the potential for exposure leading to injury and ill health.*

1. In the CHECK column of the table below, please check the hazards identified for the activity.
2. For each identified hazard, please refer to the identification sheet by simply clicking on the corresponding paragraph (column §).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **§** | **Hazard** | **Check** | **Definition** | **Ref.** |
| [4.1](#_Chimique) | Chemical |  | All hazardous situations involving chemicals (product whether marketed or not, of natural origin or manufactured, used or emitted in different forms (solid, powder, liquid, gas, dust, smoke, fog, particles, fibers, etc.)), in the conditions of use and/or exposure. | [Link HSE](https://hse.cern/content/chemical-risks-c) |
| [4.2](#_Mécanique) | Mechanical |  | All dangerous situations involving moving parts that can come into contact with a part of the human body and cause injury. These elements are often related to equipment or machines but can also relate to tools, parts, loads, projections of materials or fluids. | [Link HSE](https://hse.cern/content/mechanical-hazards-m) |
| [4.3](#_Rayonnements_non-ionisants) | Non-Ionising Radiation |  | A type of low-energy radiation that does not have enough energy to remove an electron (negative particle) from an atom or molecule. Non-ionizing radiation includes visible, infrared and ultraviolet light; microwave; radio waves; and radio frequency energy from cell phones. | [Link HSE](https://hse.cern/content/non-ionising-radiation-nir) |
| [4.4](#_Rayonnements_Ionisants) | Ionising Radiation |  | Ionizing radiation consists of charged particles (e.g. positive or negative electrons, protons or other heavy ions and/or uncharged particles (e.g. photons or neutrons) capable of causing process ionization primary or secondary Ionizing radiation can be direct and indirect. | [Link HSE](https://hse.cern/content/radiation-protection-rp) |
| [4.5](#_Incendie) | Fire |  | Set of dangerous situations involving elements that can trigger an uncontrolled fire, the main characteristic of which is to spread. | [Link HSE](https://hse.cern/content/fire-safety-fs) |
| [4.6](#_Électrique) | Electrical |  | All dangerous situations involving the risk of contact, direct or otherwise, with a bare live part, the risk of short circuits, and the risk of electric arcing. Its consequences are electrification, electrocution, fire, explosion ... | [Link HSE](https://hse.cern/content/electrical-hazards-el) |
| [4.7](#_Biologique) | Biological |  | All dangerous situations involving organisms or substances derived from an organism which represent a threat to health. This includes wastes, microorganisms, viruses or toxins. | [Link HSE (COVID-19)](https://hse.cern/content/official-documentation-cern-instructions-covid-19) |
| [4.8](#_Condition_de_travail) | Work Conditions |  | All dangerous situations concerning the entire working environment as well as ergonomics. | [Link HSE (Health)](https://hse.cern/content/safety-and-health-risks-sh)  [Link HSE (Worksite)](https://hse.cern/content/worksite-ws) |
| [4.9](#_Situation_d’urgence) | Emergency Preparedness |  | Set of dangerous situations involving all elements that may have an impact on the response to emergency situations | [Link HSE](https://hse.cern/content/accidents-and-incidents-management-aim) |
| [4.10](#_Autres_dangers) | Other hazards |  | Other hazards not indicated in this list | [Link HSE](https://hse.cern/content/safety-rules-domain) |
| [5](#_Protection_de_l’environnement) | Environmental Protection |  | Activity interacting or likely to interact with the environment (environment in which an organism operates, including air, water, soil, natural resources, flora, fauna, humans and their interrelationships) | [Link HSE](https://hse.cern/services-support/environmental-protection) |

# Your Area

## Activity Summary Information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Title*** | *Enter the name of the specific activity* | | | |
| ***Personnel*** | Name of the activity responsible: | *Enter the name of the person leading activity* | | |
| Estimated number of participants: | *Enter the number of people performing the activity* | | |
| ***Dates*** | Start date of the activity: | *DD/MM/YYYY* | Estimated end date of the activity: | *DD/MM/YYYY* |
| ***Location*** | Building number and specific zone: | *Enter the building/area where the activity is taking place (i.e. 32)* | | |
| Location details: | *Enter the room where the activity is taking place (32/4-B09 Office)* | | |
| ***Support*** | CERN specific support (Group): | *Enter the name of the CERN group supporting on the activity (i.e. EN-HE, EN-EL, EN-AA, EN-CV…)* | CMS specific support (Team): | *Enter the name of the CMS team supporting on the activity (i.e. CMS TC technicians, CMS electricians…)* |

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| ***Existing documents (EDMS, Indico, …)*** | Safety file: | *Risk assessments, certificates, training records, VICs, etc. …* |
| Technical documents: | *Technical documents for the tooling/equipment used, for the subdetectors/parts of subdetectors for which this activity is performed, etc. ….* |
| Other useful documents for understanding the activity: | *Procedures, instructions, task sheets, maintenances, etc. ….* |
| **Link with HSE (including HSE-RP)** | Support by HSE on an already existing subject of activity: | *HSE-RP, HSE inspections, etc. …* |
| Reference documents (if any): | *Additional supporting documentation from HSE: reports, derogation requests, advice, etc.* |

## Description of the Activity

*Further details about the activity. Please detail:*

* *The scope of the activity*
* *Operating procedure (Step by Step description of the activity). Please clarify:* 
  + *who, what, when, where, how*
  + *Tools/equipment used (i.e. machine tools (lathe, pillar drill, etc.), hand tools (screwdriver, grinder, etc), Platforms (individual platforms, scissor lifts, cherry pickers, etc), handling equipment (crane, hoist, etc), etc…*
  + *If multiple teams intervening, which tasks are performed by which team*
* *Any other relevant info (i.e. if there are instructions available or specific procedures, add the reference document link)*

***For the Section below, please consider to have a look to this valuable HSE Guideline:*** [***https://edms.cern.ch/document/1114042***](https://edms.cern.ch/document/1114042)

***In there you can find for the hazards and have examples of causes of potential related hazardous events, hazardous events and consequences. Also, reference “preventing controls” and “protective controls” are listed.***

# Une image contenant texte, signe Description générée automatiquementUne image contenant texte, signe, poteau, clipart Description générée automatiquementIdentification of the hazards for your activity

**Yes**

## Chemical

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| --- | --- | --- | --- |
| **Subject** | **Sign** | **Details (Commercial name, quantity, if liquid solid or gas, type of use)** | **Recommendations** |
| Explosive | http://upload.wikimedia.org/wikipedia/commons/thumb/4/4a/GHS-pictogram-explos.svg/600px-GHS-pictogram-explos.svg.png | Click or tap here to enter text. | *For each activity involving a hazardous chemical agent and for each hazardous chemical agent involved, the organic unit concerned shall carry out a risk assessment. The sections below report general measures applicable to all chemicals. in case of specific points applicable to that specific chemical, they are reported on the specific row.*  *An up-to-date inventory must be kept by the person*  *responsible for an activity involving nanomaterials, using CERES (please refer to the TSO).*  *The product’s Safety Datasheet Sheet (SDS) shall be consulted to identify the hazards related to the product, the PPE to be used, and how to safely handle the product.*  *The SDS shall be available in the location where the product is used.*  *The number of persons exposed or likely to be exposed to hazardous chemical agents, the quantity of hazardous chemical agents present in the workplace, the level and duration of any exposure, emission, generation or release of this products shall be reduced to a minimum.*  *Eating, drinking and smoking in areas where hazardous chemical agents are used shall be prohibited.*  *Areas where persons are exposed or likely to be exposed to hazardous chemical agents are clearly identified by appropriate warning and safety signs and that access to such areas is limited to persons who, by reason of their duties, are required to enter them.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Flammable | http://farm5.static.flickr.com/4063/4642164253_abd2103c3b.jpg | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.  Flammable products must be stored in designated cabinets (with metallic retention trays), and in safety cans if needed. The flammable warning sign shall be placed on the cabinets where the products are stored. The SDS of the products shall also be present.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Oxidant | http://www.stagedive.org/wp-content/uploads/ghs%20pictograms.jpg | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Corrosive | http://farm5.static.flickr.com/4043/4642164203_a0ef28b0d7_m.jpg | Click or tap here to enter text. | *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Irritant | http://www.macoil.be/sds/Flag/600px-GHS-pictogram-exclam.svg.png | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Cancerogenic, mutagenic, toxic for reproduction |  | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.*  *Strict hygiene measures shall be applied such as cleaning of floors, walls and other surfaces where there is a risk of contamination of the work environment from carcinogens, mutagens or toxic to reproduction substances. A high standard of personal hygiene should always be adopted: wash your hands before breaks and after work.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Substance of specific toxicity that certain target organs (STOT) |  | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Respiratory sensitizing |  | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.*  *A high standard of personal hygiene should always be adopted: wash your hands before breaks and after work.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Harmful if inhaled |  | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Acute toxicity | http://farm5.static.flickr.com/4041/4642776842_33b0b0583e_m.jpg | Click or tap here to enter text. | *Ensure proper ventilation of the workplace. If ventilation is poor or not sufficient, Local Exhaust Ventilation (LEV) systems can be used. LEV are subject to control of their performance by a competent person.*  *(More information about chemical agents on* [*EDMS 940853*](https://edms.cern.ch/document/940853)*).*  *(More information about prevention and protective measures on* [*EDMS 1113405*](https://edms.cern.ch/document/1113405)*).* |
| Dangerous for the aquatic environment | http://upload.wikimedia.org/wikipedia/commons/thumb/b/b9/GHS-pictogram-pollu.svg/600px-GHS-pictogram-pollu.svg.png | Click or tap here to enter text. | *A Safety inspection by HSE is mandatory before the commissioning of a new or a modified installation.*  *(More information about avoiding chemical pollution of water on* [*EDMS 335814*](https://edms.cern.ch/document/335814)*).* |
| Lead (ex: bricks) |  | Click or tap here to enter text. | *Activities generating lead dust or fumes will normally require Local Exhaust Ventilation (LEV) systems.*  *The occupational exposure limit for lead in air must be respected for all activities where there is the potential for exposure to lead dust, fumes or vapour.*  *Wherever the risk assessment concludes that Personal Protective Equipment (PPE) must be used, such equipment must be provided by the supervisor and used by the worker concerned in accordance with the relevant instructions.*  *(More information about safe handling and storage of lead on* [*EDMS 1050102*](https://edms.cern.ch/document/1050102)*,* [*EDMS 1816068*](https://edms.cern.ch/document/1816068)*,* [*EDMS 1697818*](https://edms.cern.ch/document/1697818)*).* |
| Asbestos  Presence?  Asbestos removal required? |  | Click or tap here to enter text. | *Anybody responsible for organising or supervising work to remove asbestos on the CERN site must provide the HSE with notification prior to the work being carried out and as soon as planning begins.*  *In case of other work (other than removal), waste and used packaging liable to release asbestos fibres must be packaged in a way that ensures that no asbestos dust is dispersed during handling, transport and storage. The containers or bags sealed with self-adhesive tape shall be labelled with the appropriate pictogram ‘Danger Amiante/Asbestos’.*  *(More information about asbestos on* [*EDMS 335809*](https://edms.cern.ch/document/335809)*).* |
| Risk of low oxygen concentration |  | Click or tap here to enter text. | *A risk assessment shall clarify if fixed detection is needed.*  *Personnel shall switch on and wear portable ODH detectors. A training for the use of the portable sensors is recommended and available on the CERN Learning Hub: "*[*Portable ODH Detector / Détecteur ODH Portable*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000040670&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N)*".* |
| Risk of high CO2 concentration |  | Click or tap here to enter text. | *A risk assessment shall clarify if fixed detection is needed.*  *Personnel shall switch on and wear portable ODH detectors. A training for the use of the portable sensors is recommended and available on the CERN Learning Hub: "*[*Portable ODH Detector / Détecteur ODH Portable*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000040670&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N)*".* |
| ATEX risk (potentially explosive atmosphere) |  | Click or tap here to enter text. | *Work in ATEX zones 0 and 20 is prohibited.*  *Any ‘hot work’ in or near to a hazardous area is subject to the completion of the CERN fire permit by the person concerned.*  *Installations or work equipment are only brought into service, if the organic unit concerned can demonstrate that they can be safely used in an explosive atmosphere (devices certified in ATEX).*  *Prevention of ignition hazards also take account of electrostatic discharges: use of appropriate working clothes and ESD shoes (certified in ATEX).*  *All installations must be grounded (to avoid the risk of discharge).*  *Electrical devices that are not ATEX certified are prohibited.*  *(More information about ATEX on* [*EDMS 1097065*](https://edms.cern.ch/document/1097065)*).* |
| Nanomaterials |  | Click or tap here to enter text. | *An up-to-date inventory of the identified nanomaterials must be kept by the person*  *responsible for an activity involving nanomaterials, using CERES.*  *The nanomaterials warning sign shall be placed on cupboards, points of entry to storage areas, laboratories or other areas where nanomaterials are stored or handle.*  *For activities involving engineered nanomaterials, it is recommended that the methodology described in the Directive from EPFL is consulted to estimate the Nano Risk level and to provide details of which protection measures are required.*  *The HSE recommends the respect of exposure limits based on the physical, chemical or toxicological properties of the nanomaterial concerned.*  *(More information about nanomaterials on* [*EDMS 1113400*](https://edms.cern.ch/document/1113400)*).* |
| Other: Storage of chemical products, disposal of chemical products… |  | Click or tap here to enter text. | *Incompatible chemical agents shall not be stored together as this may cause explosion, fire, liquid projection or release of a toxic or harmful gas.*  *(More information about storage of hazardous chemical agents on* [*EDMS 1028290*](https://edms.cern.ch/document/1028290)*).*  *An inventory of the quantities and types of chemical agents present on-site shall be updated in the CERN-developed tool CERES. (please refer to the TSO)*  *Dangerous goods (chemical, radioactive) are submitted to the ADR regulation, there are special provisions that must be respected when doing the transport of dangerous waste (UN number + hazard class + packaging). A* [*SIT (Storage and/or Internal Transport)*](https://edh.cern.ch/Document/SupplyChain/SIT) *request shall be done on EDH.* |

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## Gérard-Philipe : contamination à la Legionella pneumophilia - Saint-Cyr-L&#39;École, site officiel de la Mairie Saint-Cyr-L&#39;École, site officiel de la MairieMechanical

**Yes**

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| --- | --- | --- | --- |
| **Subject** |  | **Details (notes, drawings, quantity,…)** | **Recommendations** |
| Use of lifting devices and accessories  (Overhead crane, hoist, etc.)  (details, standard devices/prototype/equipment not CE marked, anchor point, lifting point identification, weight, dimension, position of the centre of gravity, degrees of fragility) |  | Click or tap here to enter text. | *The area below lifting operations shall be free from personnel presence. No work underneath loads is allowed.*  *Lifting equipment and accessories shall be periodically inspected and have successfully passed the inspection. (HSE Contact Person* [*Chris Burnett*](mailto:chris.burnett@cern.ch)*).*  *Personnel using cranes, bridges cranes, gantry cranes and power-driven hoists shall have successfully completed training in accordance with CERN rules (for CERN employees) or with the applicable laws (for contractor’s employees) and shall be authorised for their use.*  *(More information about lifting equipment on* [*EDMS 875611*](https://edms.cern.ch/document/875611) *and* [*EDMS 1453110*](https://edms.cern.ch/document/1453110)*).* |
| Using the MEWP  (Scissor lift, Cherry picker, etc.) |  | Click or tap here to enter text. | *Personnel must have the mandatory trainings for the use of MEWP. Specific risks training: MEWP for MEWP (PEMP) drivers.*  *The area below the MEWP operation perimeter shall be fenced off.*  *An authorized and trained helper shall be on the floor to guide and help MEWP driver operations.*  *Working on category B MEWP (i.e. cherry pickers) requires the use of the Safety harness.*  *Working on category A MEWP (i.e. scissor lift, star 10) doesn't require the use of the Safety harness unless specified in the manufacturer manual.*  *(More information about the use of MEWP on* [*EDMS 875611*](https://edms.cern.ch/document/875611)*,* [*EDMS 1453111*](https://edms.cern.ch/document/1453111) *and* [*EDMS 1279447*](https://edms.cern.ch/document/1279447)*).* |
| Scaffolding  (Rolling, Fixed, ...) |  | Click or tap here to enter text. | *The commissioning of the scaffolding must be done as required by the regulation. Examen de montage et d’installation.*  *The daily inspection on the scaffolding must be done as required by the regulation. Rapport de verification journaliere de l’echafaudage.*  *It is forbidden to mix mechanical component for the installation of the scaffolding.*  *Any damage on the scaffolding must be reported immediately to the owner.* |
| Cryogenics  (details, system information and operating parameters, periodic inspections) |  | Click or tap here to enter text. | *All cryogenic equipment shall be CE or π marked and be designed and manufactured in accordance with the applicable CERN Safety Rules and European directives.*  *Pressurized cryogenic equipment shall be periodically inspected and requalified.*  *The owning organic unit shall affix, on the cryogenic equipment the identification number allocated by the CERN Safety Inspection Service, the relevant characteristics of the item of cryogenic equipment (in English or French or in both languages), the appropriate configuration for safe use (if possible) and all Safety signs appropriate to the risks.*  *(More information about cryogenic equipment on* [*EDMS 1327191*](https://edms.cern.ch/document/1327191)*).* |
| Pressure equipment  (details, if the necessary tests have been carried out (i.e. pressure test, periodic checks)) |  | Click or tap here to enter text. | *The installation, acceptance, commissioning and use of standard pressure equipment shall be done according to CERN.*  *Pressure vessels, simple pressure vessels and Safety accessories for pressure equipment shall be periodically inspected and have successfully passed the inspection. (Contact person for acceptance inspections of the Safety accessories:* [*Cyril Pochet*](mailto:Cyril.Pochet@cern.ch)*,* [*Olivier Mathieu*](mailto:Olivier.Mathieu@cern.ch)*).*  *Pressure tests shall be performed outside of working hours, fencing the area. No access shall be allowed in that area.*  *Pressure equipment shall be registered in the EAM database. Equipment owners shall keep EAM date up to date. Instructions for the registration of the different type of equipment are available on EDMS:*   * *Vessels:* [*EDMS 3193890*](https://edms.cern.ch/document/3193890) * *Lines:* [*EDMS 3195225*](https://edms.cern.ch/document/3195225) * *Safety Valves:* [*EDMS 3226168*](https://edms.cern.ch/document/3226168)   *(More information about pressure equipment on* [*EDMS 875610*](https://edms.cern.ch/document/875610) *and* [*EDMS 1453950*](https://edms.cern.ch/document/1453950)*).*  *HSE contact:*   * [*mechanical-pressure-safety@cern.ch*](mailto:mechanical-pressure-safety@cern.ch) |
| Machinery  (details, use and type of machine tools, equipment used) |  | *In example, use of a column drill for preparing parts for the assembly of a detector. Or a hand grinder to cut pieces of equipment.* | *Machinery shall comply with CERN Safety Rules. Nonconformities of machine tools shall be identified by the HSE inspection service. (Contact Person* [*Jean-paul Jullien*](mailto:Jean-Paul.Jullien@cern.ch)*,* [*Chris Burnett*](mailto:chris.burnett@cern.ch)*).*  *Machines used in CERN workshops shall be identified with a plate and declared to EN-MME-MS. (Contact Person* [*Alain Stalder*](mailto:Alain.Stalder@cern.ch) *).*  *For Machine a “Fiche de poste/Workstation task sheet” (*[*EDMS 1218315*](https://edms.cern.ch/document/1218315)*). The workshop supervisor (WS) is the contact person for the specific workshop, please refer to them for more information.*  *Personnel using machine tools shall have successfully completed training in accordance with CERN Rules (for CERN employees) or with the applicable laws (for contractors’ employees) and shall be authorised for their use.*  *The agreement concerning the use of work equipment in CERN workshops shall be signed whenever an operator, who is a CERN member of the personnel or contractor, and not part of the group that owns or manages the workshop uses such workshop for the first time (available on* [*EDMS 1562364*](https://edms.cern.ch/document/1562364) *and* [*EDMS 1562362*](https://edms.cern.ch/document/1562362)*).*  *(More information about machinery on* [*EDMS 1218317*](https://edms.cern.ch/document/1218317)*).* |
| Other: *Mechanical properties (sharp, rough, slippery), vacuum…* |  | Click or tap here to enter text. |  |

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## Non-ionising radiation

**Yes**

|  |  |  |  |
| --- | --- | --- | --- |
| **Subject** |  | **Details** | **Recommendations** |
| Laser (details, laser class) |  | Click or tap here to enter text. | *The installation, labelling and use of lasers shall follow the CERN Rules for the safe use of lasers.*  *LSO and LSSO shall be assigned for a Designated Laser Area (DLA) and ensure Laser Safety, including compliance with the relevant Safety Rules. A training for* [*“Laser Safety Support Officer (LSSO)”*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000044300&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N) *is available on LMS. Please refer to LSO/LSSO for more information.*  *(More information about the LSSO roles on and* [*EDMS 2476308*](https://edms.cern.ch/document/2476308)*).*  *Lasers classed as 3B or 4 are hazardous and must be notified to HSE, following which the installation will be inspected and the working methods verified. (Contact person* [*Jordan Minier*](mailto:jordan.minier@cern.ch)*,* [*Igor Neuhold*](mailto:igor.neuhold@cern.ch)*).*  *Designated Laser Areas must be clearly identified.*  *Entry to a Designated Laser Area shall be limited to authorized personnel only when the laser is in operation.*  *Trainings for personnel working with lasers,* [*"Laser - User"*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000043832&TX=FORMAT1&LANGUAGE_TAG=*ALL*&DECORATEPAGE=N) *and for personnel working in the vicinity of lasers,* [*"Laser - Awareness"*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000044033&TX=FORMAT1&LANGUAGE_TAG=*ALL*&DECORATEPAGE=N) *are available on LMS.*  *When high-power pulsed lasers are used, an interlock on the door leading into the area should be provided to prevent entry when the laser is in use.*  *Protective eyewear specifically designed or specified for the wavelength(s) of the accessible laser radiation shall be used.*  *(More information about lasers on* [*EDMS 335744*](https://edms.cern.ch/document/335744)*).* |
| Optical radiation  (i.e. welding) |  | Click or tap here to enter text. | *Light-tight cabinets and enclosures, UVR absorbing glass and plastic baffles shall be used to avoid direct contact with the eyes.*  *Googles, spectacles, visors or face shields, which absorb UV radiation, shall be worn when performing activities with optical radiation hazard.* |
| Magnetic fields (DC 🡪 50KHz) |  | Click or tap here to enter text. | *Activity Responsible shall ensure that workers under their responsibility that are exposed to Static Magnetic Fields are informed of the exposure, of the risks and health effects related thereto and are adequately trained.*  *A training for personnel working in the vicinity of high-power magnets, or regularly working close to strong magnetic sources or large magnets,* [*“Magnetic Fields – Working nearby high-power magnets”*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000039993&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N) *is available on LMS.*  *Personnel with active implantable medical devices are not allowed in areas with Magnetic Field above 0,5mT.*  *A training for personnel accessing areas with a potential risk of exposure to static magnetic fields with B greater than or egal to 0.5 mT,* [*“Magnetic Fields – Awareness”*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000044348&TX=FORMAT1&LANGUAGE_TAG=*ALL*&DECORATEPAGE=N)*, is available on LMS.*  *(More information about Static Magnetic Fields on* [*EDMS 2974732*](https://edms.cern.ch/document/2974732)*).* |
| Other: Click or tap here to enter text. |  | Click or tap here to enter text. | Click or tap here to enter text. |

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## Une image contenant texte, signe, clipart Description générée automatiquementIonising radiation

**Yes**

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|  | **Subject** |  | **Detail** | **Recommendations** |
| ***WORKING ENVIRONMENT*** | Risk of contamination  (Environment, Equipment) | INTERNAL  EXTERNAL  Click or tap here to enter text. | | Click or tap here to enter text. |
| Work in a classified area (check [RAISIN](https://service-raisin-prod.web.cern.ch/Raisin-Web/)): | Une image contenant texte, rouge, capture d’écran  Description générée automatiquement  Click or tap here to enter text. | | *Dedicated DIMR/WDP shall be drafted for the different activities taking place in a classified area, detailing the works with respect to the “JOLi” principles.*  *A training for to create a DIMR and/or a WDP activity form,* [*"Radio Protection - DIMR/WDP"*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000043595&TX=FORMAT1&LANGUAGE_TAG=*ALL*&DECORATEPAGE=N)*, is available on LMS.*  *Personal and operational dosimeters shall be worn considering the classification of the area.*  *Eating and drinking in a classified area shall be prohibited.*  *From the time a pregnancy is established through to the birth of the child, the equivalent dose of occupationally exposed women must not exceed 1 mSv, and that to the foetus, from external radiation or from the incorporation of radionuclides, must also not exceed 1 mSv.*  *Women who are breast-feeding are not allowed to perform any work involving radioactive substances that entails a risk of internal or external contamination.*  *Persons under the age of sixteen must not be classified as occupationally exposed persons.*  *Trainings for personnel working in a supervised area,* [*"Radiation Protection - Supervised area"*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000043170&TX=FORMAT1&LANGUAGE_TAG=*ALL*&DECORATEPAGE=N) *and in a controlled area,* [*"Radio Protection - Controlled area"*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000039923&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N)*,*  *are available on LMS.*  *(More information about Radio Protection is available on* [*EDMS 335729*](https://edms.cern.ch/document/335729)*).* |
| Open/closed sources |  | Click or tap here to enter text. | *The use of radioactive sources shall be performed by training and authorized personnel (a depliant for the use of radioactive source is available on* [*EDMS 856968*](https://edms.cern.ch/document/856968)*).* |
| Presence of destructive work (i.e. drilling/cutting activated material): |  | Click or tap here to enter text. | *Destructive works shall be declared on IMPACT: an RP vacuum cleaner shall be used and further measures (i.e. FFP3 masks, etc.) will be provided by HSE-RP.  A training for to create a DIMR and/or a WDP activity form,* [*"Radio Protection - DIMR/WDP"*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000043595&TX=FORMAT1&LANGUAGE_TAG=*ALL*&DECORATEPAGE=N)*, is available on LMS.* |
| Radiographic tests |  | Click or tap here to enter text. | *Radiographic tests shall be performed out of working hours, fencing off the area and previously announced to TSO, CMS Safety and CMS RP. No access shall be allowed in that area.* |
| ***WASTE*** | Waste production ([CADRA](https://edms.cern.ch/document/1364231/2.4)) :  (details, solid / liquid (water discharge)/dust/conventional) |  | Click or tap here to enter text. | *Potentially activated and activated material shall follow traceability procedures by registering it via TREC.* |
| Electrical cables ([CADRA Cables](https://edms.cern.ch/document/1724006/1.2)): |  | Click or tap here to enter text. | *Potentially activated and activated material shall follow traceability procedures by registering it via TREC.* |
| ***TRANSPORT***  *What? Or? To?* | Inter-site transport (handling): |  | Click or tap here to enter text. | *Dangerous goods are submitted to the ADR regulation, there are special provisions that must be respected when doing the transport of dangerous waste (UN number + hazard class + packaging). A* [*SIT (Storage and/or Internal Transport)*](https://edh.cern.ch/Document/SupplyChain/SIT) *request shall be done on EDH.* |
| Transport between sites (ADR road transport): |  | Click or tap here to enter text. | *Dangerous goods are submitted to the ADR regulation, there are special provisions that must be respected when doing the transport of dangerous waste. For the transport, an EDH transport request shall be made specifying the product’s UN number.* |
| Import-Export (Shipping): |  | Click or tap here to enter text. | *Dangerous goods (chemical, radioactive) are submitted to the ADR regulation, there are special provisions that must be respected when doing the transport of dangerous waste (UN number + hazard class + packaging). A* [*SIT (Storage and/or Internal Transport)*](https://edh.cern.ch/Document/SupplyChain/SIT) *request shall be done on EDH.* |
| ***STORAGE*** | Where? (details, specify) |  | Click or tap here to enter text. | *All activated products shall be labelled and stored in a dedicated zone. This zone shall be protected from adverse weather. This area shall be identified by Safety warning signs shall be.* |
| Volume? (m3 or floor surface) |  | Click or tap here to enter text. | Click or tap here to enter text. |
| Duration of storage: (details, start date / duration of storage) |  | Click or tap here to enter text. | Click or tap here to enter text. |
| What? |  | Click or tap here to enter text. | Click or tap here to enter text. |

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**Yes**

## Fire

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| --- | --- | --- | --- |
| **Subject** |  | **Details** | **Recommendations** |
| Fuel (presence of fuel/combustible material (i.e. cardboard boxes, pallets…):  (details, type/quantity/use/ handling) |  | *The room where the activity is taking place also serves as storage of material that can be combustible, general untidiness of the room…* | *The workplace shall be kept tidy. Waste shall be evacuated at the end of every activity.*  *Dedicated storage areas shall be identified to avoid having storage (i.e. carboard boxes, pallets) next to/on sensitive equipment that could be a potential ignition source (i.e. racks, electrical cabinets).* |
| Material:  (details, type/quantity/use/handling) |  | *Material used in the different parts of the subdetectors, cables and piping used on the installations …* | *Materials used at CERN shall be compliant with CERN rules regarding Fire Safety (CERN IS41 for plastic and non-metallic and SSI-FS-2-1 for cables.*  *(More information about IS41 on* [*EDMS 335826*](https://edms.cern.ch/document/335806) *and SSI-FS-2-1 on* [*EDMS 2669629*](https://edms.cern.ch/document/2669629)*).* |
| Possible ignition source:  (details, presence of a particular ignition source) |  | *Presence of racks, test benches in the same room where the activity is taking place* | *Possible ignition sources shall be kept away from combustible material.*  *Monitoring system with Safety interlocks can be installed on equipment to supervise test activities.*  *General Emergency Stop (AUG) and Local Emergency Stop (AUL) shall be installed on electrical equipment allowing the cut of the power in case of emergency.* |
| Hot work  (Open flames, electrical equipment,  hot surfaces, chargers, etc.) |  | Click or tap here to enter text. | *CERN Fire Permit shall be created on IMPACT for any ‘hot work’. It shall be approved before the start of the operations.*  *IS37 to disable the Fire Detection system when any operation could trigger it (i.e. welding/grinding), is needed. The IS37 shall be limited in space and time (only for the time needed of intervention, ensure the re-enabling after working hours and weekends).*  *Proper grounding of welding machines shall be ensured. The grounding clamp shall be hooked up to a clean piece of metal (avoid using painted or coated surfaces) that is connected to earth and as close to the welding zone as possible.*  *Protective curtains and/or fire blankets protecting the surrounding equipment shall be used when performing hot works to avoid the spreading of smoke and sparks. Fire extinguishers shall be present nearby.* |
| Need modifications / openings  in the fire partitioning (i.e. between buildings/rooms for services passage) |  | *Fire partitioning is the division of a building into smaller areas to contain the spread of fire, smoke and heat. Therefore, if an activity implies the creation of openings to pass services (i.e. cables, pipes, etc.) through a wall, the fire partitioning shall be restored.* | *It shall be ensured that all generated openings between different areas (i.e. buildings, rooms) are properly sealed to ensure integrity and maintain fire compartmentalization.* |
| Other: Click or tap here to enter text. |  | Click or tap here to enter text. | Click or tap here to enter text. |

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Description générée automatiquement[**Back to the list of hazards**](#_Définition_des_dangers)

**Yes**

## Electrical

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| **Subject** |  | **Details** | **Recommendations** |
| Electrical activity in laboratories (LV/HV, for testing, measurements, specific operations…) |  | *For tasks such as:*   * *Connection, disconnection and operation of equipment at plug sockets up to 63A.* * *Installation and operation of standardised rack mounted electrical equipment in relation to experimental apparatus at CERN within existing racks and the connection of modules and modular power supplies with standardised connectors.* * *Performance of localised disconnection and locking of standardised electrical plugs for work carried out directly by the person concerned and for equipment under their responsibility, where the point of isolation is a plug and socket outlet.* * *The construction and assembly of electrical cables in a workshop environment, up to 6 mm2 for signal cabling and power distribution, and up to 16 mm2 for earthing.* * *Cable installation, connection and disconnection at types of terminals described in the training material (IP2X/IP3X) and following the procedures outlined therein (e.g. unplugging, locking and verification of the absence of voltage).* * *Repair and removal operations on experimental apparatus, when the equipment is disconnected and unplugged. If the operation requires the removal of any housing or protective screens these must be replaced before the equipment is re-powered.* * *Live electrical measurements are only permitted on equipment with IP2X/IP3X protective covers, to be made in the course of normal operation as part of a written and verified procedure and risk assessment.* * *Design, construction and modification of experimental equipment, subject to an “electrical safety inspection” being carried out before it is energised.* * *Mechanical work for the installation of cables and cable containment systems, where the routes employed are not shared with existing cables. Interconnecting with existing infrastructure is not permitted.* * *Cable installation and termination in a non-electrical environment, up to 6 mm2 for signal cabling and power distribution, and up to 16 mm2 for earthing.* | *An “Authorisation to carry out specific electrical activities in CERN experimental areas” is required when working in experimental areas (i.e. laboratories). This authorisation is delivered after the completion of the training* [*“Electrical Safety – Working in EP experiments – initial”*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000041653&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N) *available on LMS. This authorisation shall be filled out by the by the Group Leader, for MPEs, or by the Home Institute supervisor (typically the Team Leader), for MPAs. (More information about this training on* [*EDMS 2539300*](https://edms.cern.ch/document/2539300)*).*  *Lock-out procedure shall be performed whenever possible.*  *No live or potentially live component shall be present on equipment or installations.*  *Electrical equipment and installations shall be grounded.*  *Electrical equipment and installations shall be inspected before they are first used, after any major modifications and periodically by HSE.*  *(More information about Electrical Safety on* [*EDMS 335725*](https://edms.cern.ch/document/335725) *and* [*EDMS 1212097*](https://edms.cern.ch/document/1212097)*).* |
| Non-electrical activity in an electrical environment (LV/HV, cable pulling, works (painting, masonry, pruning/delimbing, mechanics, etc.) |  | *Works taking place in an electrical environment such as cable pulling in a cable tray populated with live cables, mechanical operations (i.e. drilling, cutting) close to electrical equipment and where there is a possibility of direct contact with live equipment.* | *Electrical equipment must be protected with solid protection against dust and mechanical damage.*  *Personnel working in the vicinity of electrical equipment shall be trained and informed about the risks related to the works to be performed. A training for* [*“Electrical accreditation – non-electrician – initial”*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000039906&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N) *is available on LMS.*  *Lock-out procedure shall be performed whenever possible. Works shall be performed with no power/tension on the electrical equipment.*  *Work permit:* [*https://hse.cern/content/electrical-hazards-el*](https://hse.cern/content/electrical-hazards-el) |
| Electrical activity (LV/HV, for lockouts, repairs, maintenance, etc.) |  | *For works on electrical equipment or installation* | *Personnel working on electrical equipment shall be trained and informed about the risks related to the works to be performed. The trainings for* [*“Electrical accreditation – electrician low voltage – initial”*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000039976&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N) *and* [*“Electrical accreditation – electrician low and high voltage – initial”*](https://lms.cern.ch/ekp/servlet/ekp?PX=N&TEACHREVIEW=N&PTX=&CID=EKP000040079&TX=FORMAT1&LANGUAGE_TAG=en&DECORATEPAGE=N)  *are available on LMS.*  *Lock-out procedure shall be performed whenever possible. Works shall be performed with no power/tension on the electrical equipment.*  *Work permit:* [*https://hse.cern/content/electrical-hazards-el*](https://hse.cern/content/electrical-hazards-el) |
| Electrical equipment and installation design: (details, standard/installation standard, prototype, technical file, design outside the standard approach (non-CE)) |  | Click or tap here to enter text. | *No live or potentially live component shall be present on equipment or installations.*  *Electrical equipment and installations shall be grounded.*  *Electrical equipment and installations must be inspected before they are first used, after any major modifications and periodically by HSE. (Contact Person* [*Olivier Tison*](mailto:Olivier.Tison@cern.ch)*,* [*Jean-Paul Jullien*](mailto:Jean-Paul.Jullien@cern.ch)*,* [*Maria Papamichali*](mailto:maria.papamichali@cern.ch)*).*  *(More information about Electrical Safety on* [*EDMS 335725*](https://edms.cern.ch/document/335725) *and* [*EDMS 1212097*](https://edms.cern.ch/document/1212097)*).* |
| Equipment in potentially explosive atmospheres |  | Click or tap here to enter text. | *Electrical equipment that is ATEX certified shall be used.*  *(More information about ATEX on* [*EMDS 1097065*](https://edms.cern.ch/document/1097065)*).* |
| Other: Click or tap here to enter text. |  | Click or tap here to enter text. | Click or tap here to enter text. |

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## Biological Hazard Warning Label J6805 - by SafetySign.comBiological

**Yes**

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| **Subject** |  | **Details** | **Recommendations** |
| Biological agents  (Bacteria, Viruses (i.e. COVID-19), Fungi, Endoparasite, ...) |  | Click or tap here to enter text. | *Respect the site access restrictions.  Verify HVAC status and conditions.  Use PPE.  Respect safety distances.* |
| Hygiene |  | Click or tap here to enter text. | *Respect general hygiene measures.  Personnel must regularly wash (with soap and water) or disinfect (with hydro alcoholic lotion) their hands (soap and water is more effective). In particular, this should be done, before leaving home, before putting on PPE, after removing the PPE, before all breaks, after all breaks, after having touched common equipment (lift button, phone, door handle, etc.), and just before leaving work.  Whether wearing PPE or not: - Not touch any part of their face - Sneeze and cough in a tissue or, if not available, in the elbow crease. - Blow nose in a tissue. - Dispose of tissues immediately in the waste bins provided. - Clean your hands.* |
| Other: Click or tap here to enter text. |  | Click or tap here to enter text. | Click or tap here to enter text. |

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## Une image contenant texte, signe, ciel, extérieur Description générée automatiquementWork condition

**Yes**

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| **Subject** |  | **Details** | **Recommendations** |
| Confined space? |  | Click or tap here to enter text. | *An entry permit shall be issued by the supervisor for each entry into the confined space.*  *Every access shall be performed according to specific procedure (i.e. CFRS survey and measurements of the concentration of oxygen, use of specific PPE, etc.)*  *Any electrical apparatus to be used in the confined space must be approved by HSE since confined spaces are often wet or particularly conductive.*  *Where flammable gases or vapours have to be removed, the space must be purged with an inert gas such as nitrogen or argon, the purge gases going to a safe place agreed with HSE. As this then creates a risk of asphyxiation it is necessary to purge the inert gas with air (N.B. Oxygen must never be used for purging in place of air).*  *Where welding must be carried out a suitable insulating mat must be used for the welder to stand on.*  *Only persons who have received adequate training, approved by HSE, and who are medically fit shall be allowed to enter a confined space or survey the worker.*  *More information about confined spaces on* [*EDMS 335708*](https://edms.cern.ch/document/335708)*.* |
| Work at Height? |  | Click or tap here to enter text. | *PIRL/LIR (Plate-forme Individuelle Roulante Légère/Light Individual Working Platforms) shall be used to reach and to work at elevated levels. No ladder is allowed as working area.*  *When personnel is exposed to void/openings, anchor points on fixed structures shall be installed and the Safety harness used to ensure the safe accessibility to work. The anchor point must be compliant and tested by authorised personnel (i.e. HSE experts) before using.* |
| Exposure to noise:  (dBA of equipment) |  | Click or tap here to enter text. | *Personnel may not under any circumstances exceed a Daily Exposure Level of 87 dB(A) and may not under any circumstances be subjected to a Peak Sound Pressure of 140 dB(C).*  *Noise protections shall be available to be used by personnel working in the area.*  *(More information about protection of workers against noise on* [*EDMS 1826633*](https://edms.cern.ch/document/1826633)*).* |
| Extreme temperatures |  | Click or tap here to enter text. | *Good ventilation of the workplace shall be ensured.*  *Frequent breaks and job rotation is advised. Easy access to water shall be provided.* |
| Lighting: (exterior view, natural light/artificial light) |  | Click or tap here to enter text. | *If light are cut/disrupted, temporary lighting shall be installed to ensure proper visibility in some areas.* |
| Access for people with reduced mobility |  | Click or tap here to enter text. | *Absence of barriers for access. Conform access ramps.* |
| Indoor air quality requirements |  | Click or tap here to enter text. | *Good ventilation of the workplace shall be ensured.* |
| Obstructions of pathways |  | Click or tap here to enter text. | *Material storage shall be organized far from pathways and Safety equipment. No obstacles shall be left in passage areas.* |
| Isolated work |  | Click or tap here to enter text. | *The work is always done by a minimum of 2 people lone worker prohibited. No lone-working conditions shall be allowed.*  *(More information about lone working* [*on EDMS 1406153*](https://edms.cern.ch/document/1406153)*).* |
| Slippery/unstable floor |  | Click or tap here to enter text. | *All areas where personal is passing through shall be properly secured and stability of the floors shall be ensured.*  *The areas concerned by an unstable floor (i.e. removal of floor tiles) shall be fenced off.* |
| Ergonomics: (manual handling and repetitive tasks) |  | Click or tap here to enter text. | *Personnel shall work adopting the right gestures and ergonomics. To compensate the required handling operations and effort breaks and rest are advised, alternating personnel in the task, whenever possible.*  *(Additional advice is available on* [*https://hse.cern/content/ergonomics*](https://hse.cern/content/ergonomics) *and on HSE depliant* [*EDMS 2102329*](https://edms.cern.ch/document/2102329)*).* |
| Other: Click or tap here to enter text. |  | Click or tap here to enter text. | Click or tap here to enter text. |

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## Emergency preparedness

**Yes**

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| **Subject** |  | **Details** | **Recommendations** |
| Obstruction, limitation of access and passage, deviation in the evacuation path |  | Click or tap here to enter text. | *Material storage shall be organized far from pathways and Safety equipment. No obstacles shall be left in passage areas.* |
| Inhibition of level 3 alarms/safety systems |  | *IS37 to disable the Fire Detection system when any operation could trigger it ( i.e. drilling/cutting/mechanical).* | *The IS37 shall be limited in space and time (only for the time needed intervention, ensure the re-enabling after working hours and weekends).*  *(More information about Level 3 Safety alarms and alarm systems on* [*EDMS 335802*](https://edms.cern.ch/document/335802)*).* |
| Other : Click or tap here to enter text. |  | Click or tap here to enter text. | Click or tap here to enter text. |

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## Other hazardsGérard-Philipe : contamination à la Legionella pneumophilia - Saint-Cyr-L&#39;École, site officiel de la Mairie Saint-Cyr-L&#39;École, site officiel de la Mairie

**Yes**

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| **Subject** |  | **Details** | **Recommendations** |
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# http://upload.wikimedia.org/wikipedia/commons/thumb/b/b9/GHS-pictogram-pollu.svg/600px-GHS-pictogram-pollu.svg.png Environmental Protection

**Yes**

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| **Subject** |  | **Details** | **Recommendations** |
| Use/handling/storage of potentially polluting substances (gases, liquids, solids): (dangerous for the aquatic environment, for the ozone layer) |  | Click or tap here to enter text. | *Liquid products shall be put on retention trays of adequate capacity to collect potential spillages.*  *It is strictly forbidden to introduce polluting substances, directly or through drainage, into*  *either of the drain systems.*  *A safety inspection by HSE is mandatory before the commissioning of a new or a modified*  *installation.* |
| Greenhouse gases (PFCs, HFCs, SF6, N2O, and CO2) used in air conditioning, experimental activities (detector cooling, particle detection, etc.) and electrical insulation, etc. (HFC: (ex. –HFC-134A, HFC-410Aa, HFC-23), PFC: (ex. PFC-14, PFC-116, PFC-218), SF6: R-7146, Others (ex N2O, CH4 and CO2 ...) |  | Click or tap here to enter text. | *The purchase, handling, use and elimination of F-Gases at CERN is governed by the CERN F-Gas Policy which is aligned with the relevant European Union (EU) Regulations (EU 517/2014 and EU 573/2024) as well as the implementation ordonnance of Switzerland (ORRChim Annexe 2.10).*  *Intentional release of F-Gases in the atmosphere is prohibited. The amount of F-Gas quantity used, leaks, and emissions shall be as low as technically possible during the entire lifetime of the equipment, facility or activity, including commissioning, operation, maintenance and decommissioning.*  *Operators of equipment using/containing F-gases shall have followed the CERN e-learning: F-Gases Fundamentals course.*  *(More information about F-gases policy on the HSE website* [*https://hse.cern/f-gas-guide-homepage*](https://hse.cern/f-gas-guide-homepage)*).* |
| Emissions of substances into the atmosphere (e.g. presence of paint booth, chemical bath, etc.) |  | Click or tap here to enter text. | *Emission points shall be assessed and justified.  The point of release shall be clearly identified and marked with information about: the type of fluid, the flow rate (i.e. continuous, or emergency release only), the type of related hazard, the referent person.* |
| Discharge of effluents to the site drainage (e.g. site effluents, rainwater, cooling water, etc.) |  | Click or tap here to enter text. | *Prior to discharge, CERN Organic Unit shall ensure that the HSE Unit has granted the permission to release a definite volume of water.*  *(More information effluent water on the HSE website* [*https://hse.cern/content/environmental-sampling-analysis*](https://hse.cern/content/environmental-sampling-analysis)*).* |
| Discharge of effluents into wastewater (e.g. sanitary water, etc.) |  | Click or tap here to enter text. | *Prior to discharge, CERN Organic Unit shall ensure that the HSE Unit has granted the permission to release a definite volume of water.*  *(More information effluent water on the HSE website* [*https://hse.cern/content/environmental-sampling-analysis*](https://hse.cern/content/environmental-sampling-analysis)*).* |
| Soil excavation or stripping |  | Click or tap here to enter text. | *Certain sites on the Swiss territory are registered in the STIG as they are considered as polluted. For these sites, adequate measures are implemented whenever excavation works are planned and carried out.*  *(More information about soil protection on the HSE website* [*https://hse.cern/content/soil-protection*](https://hse.cern/content/soil-protection)*).* |
| Waste production (not counting radioactive waste) |  | Click or tap here to enter text. | *Conventional waste shall be sorted and place in bins according to its nature.*  *Make sure the waste is evacuated and sorted at the end of any activity.*  *Dangerous goods are submitted to the ADR regulation, there are special provisions that must be respected when doing the transport of dangerous waste (UN number + hazard class + packaging). A* [*SIT (Storage and/or Internal Transport)*](https://edh.cern.ch/Document/SupplyChain/SIT) *request shall be done on EDH.*  *(More information about waste sorting on HSE website* [*https://hse.cern/content/waste-management*](https://hse.cern/content/waste-management) *and* [*https://sce-dep.web.cern.ch/waste/what-goes-where*](https://sce-dep.web.cern.ch/waste/what-goes-where)*)* |
| Other: Click or tap here to enter text. |  | Click or tap here to enter text. | Click or tap here to enter text. |

[**Back to the list of hazards**](#_Définition_des_dangers)

# Annex: Pictures

Attached to EDMS Reference.