

Health & Safety Specifications

For

Electrical Contractors Services for the Supply and Installation of Medium Voltage Transformers and Switchgear at the CSIR Pretoria Campus

1. SPECIFICATION CONTROL SHEET

PROJECT NAME: Electrical Contractors Services for the Supply and Installation of Medium Voltage Transformers and Switchgear at the CSIR Pretoria Campus

1.1. DECLARATION

This original document has been prepared, reviewed and received by the undersigned:

ORIGINAL			CLIENT
Prepared by:	Approved by:	Reviewed by:	Commented on by:
Name:	Name:	Name:	Name:
Signature:	Signature:	Signature:	Signature:
Date:	Date:	Date:	Date:
Capacity:	Capacity:	Capacity: Project Manager	Capacity: Client

PRINCIPAL CONTRACTOR RECEIPT	
Received by:	
Name:	
Signature:	
Date:	
Capacity:	

1.2. REVISIONS

REVISION 1		COMPANY
Prepared by:	Reviewed by:	Received by:
Name:	Name:	Name:
Signature:	Signature:	Signature:
Date:	Date:	Date:
Capacity: Agent	Capacity: Agent	Capacity:

REVISION 2		COMPANY
Prepared by:	Reviewed by:	Received by:
Name:	Name:	Name:
Signature:	Signature:	Signature:
Date:	Date:	Date:
Capacity:	Capacity:	Capacity:

2. APPLICATIONS AND INTERPRETATION

This document is to be read and understood in conjunction with the following, inter- alia:

- Occupational Health and Safety Act 85 of 1993 (OHS Act).
- All regulations published in terms of the OHS Act.
- Construction Regulations, 2014
- SABS codes referred to by the OHS Act.
- Contract Documents
- Basic Conditions of Employment Act (Act 75 of 1997)
- National Environmental Management Act 107 of 1998 and all Regulations
- Compensation for Occupational Injuries and Diseases (COID) Act No.
 130 of 1993

ABBREVIATIONS

OHS : Occupational Health and Safety

• CEO : Chief Executive Officer

• CR : Construction Regulations

• HCS : Hazardous Chemical Substances

• MSDS : Material Safety Data Sheet

• AIA : Approved Inspection Authority

• HBA : Hazardous Biological Agents

• OEL : Occupational Exposure Limit

• CSIR : Council for Scientific and Industrial Research

• H&SS : Health and Safety Specification

• HS&EP : Health, Safety and Environmental Plan

• HS&EF : Health, Safety and Environmental File

• CHSO : Construction Health and Safety Officer

3. **DEFINITIONS**

The following definitions from the Occupational Health and Safety Act are listed

as follows:

Chief Executive Officer

In relation to a body corporate or an enterprise conducted by the State, means

the person who is responsible for the overall management and control of the

business of such body corporate or enterprise.

Danger

Means anything that may cause injury or damage to persons or property.

Employee

Means, subject to the provisions of Subsection (2), any person who is employed

by or works for any employer and who receives or is entitled to receive any

remuneration or who works under the direction or supervision of an employer or

any other person.

Employer

Means, subject to the provisions of Subsection (2), any person who employs or

provides work for any person or remunerates that person or expressly or tacitly

undertakes to remunerate him, but excludes a labour broker as defined in

Section 1(1) of the Labour Relations Act, 1953 (Act No. 28 of 1956).

Healthy

Means free from illness or injury attributable to occupational causes.

Machinery

Means any article or combination of articles assembled, arranged or connected

and which is used or intended to be used for converting any form of energy to

performing work, or which is used or intended to be used, whether incidental

thereto or not, for developing, receiving, storing, containing, confining, transforming, transferring or controlling any form of energy.

Medical Surveillance

Means a planned programme of periodic examination (which may include clinical examinations, biological monitoring or medical tests) of employees by an occupational health practitioner or, in prescribed cases, by an occupational medicine practitioner.

Plant

Includes fixtures, fittings, implements, equipment, tools and appliances, and anything which is used for any purpose in connection with such plant.

Properly Used

Means used with reasonable care, and with due regard to any information, instruction or advice supplied by the designer, manufacturer, importer, seller or supplier.

User

In relation to plant or machinery, means the person who uses plant or machinery for his own benefit or who has the right of control over the use of plant or machinery, but does not include a lessor of, or any person employed in connection with, the plant or machinery.

Reasonably Practicable

Means practicable having regards to:

- a) the severity and scope of the hazard or risk concerned,
- b) The state of knowledge reasonably available concerning that hazard or risk and of any means to remove or mitigate that hazard or risk.
- c) the availability and suitability of means to remove of mitigate that hazard or risk; and
- d) The cost of removing or mitigating that hazard or risk in relation to the benefits deriving there from.

Risk

Means the probability that injury or damage will occur.

Safe

Means free from any hazard.

Standard

Means any provision occurring:

- a) in a specification, compulsory specification, code of practice or standard method as defined in Section 1 of the Standards Act, 1993 (Act No. 29 of 1993); OR
- b) in any specification, code or any other directive having standardization as its aim and issued by an institution or organization inside or outside the Republic which, whether generally or with respect to any particular article or matter and whether internationally or in any particular country or territory, seeks to promote standardization.

The following definitions from the Construction Regulations are listed as follows:

Agent

Means any competent person who acts as a representative for a client.

Competent Person

Means any person having the knowledge, training, experience and qualifications specific to the work or task being performed:

Provided that where appropriate qualifications and training are registered in terms of the provisions of the South African Qualifications Authority Act,

1995 (Act No. 58 of 1995), these qualifications and training shall be deemed to be the required qualifications and training.

Construction work

Means any work in connection with:

a) the construction, erection, alteration, renovation, repair, demolition or

dismantling of or addition to a building or any similar structure;

b) the construction, erection, maintenance, demolition or dismantling of any

bridge, dam, canal, road, railway, runway, sewer or water reticulation

system or any similar civil engineering structure; or the moving of earth,

clearing of land, the making of an excavation, piling or any similar civil

engineering structure or type of work.

Construction work permit means a document issued in terms of regulation 3;

Contractor

Means an employer who performs construction work.

Hazard Identification

Means the identification and documenting of existing or expected hazards to the

health and safety of persons, which are normally associated with the type of

construction work being executed or to be executed.

Health and Safety File

Means a file, or other record containing the information required in these

regulations.

Health and Safety Plan

Means a site, activity or project specific documented plan in accordance with the

client's health and safety specification;

Health and Safety Specification

Means a site, activity or project specific document prepared by the client

pertaining to all health and safety requirements related to construction work;

Method Statement

Means a document detailing the key activities to be performed in order to reduce as reasonably as practicable the hazards identified in any risk assessment.

Principal Contractor

Means an employer appointed by the client to perform construction work;

Risk Assessment

Means a program to determine any risk associated with any hazard or aspect at a construction site, in order to identify the steps to be taken to remove, reduce or control such hazard.

4. DESCRIPTION OF WORK

Refer to schedule as per contract

5. DESCRIPTION OF THE SITE

The construction work – Buildings 03 and 33, on CSIR Campus, Pretoria

6. APPLICATION OF THE CONSTRUCTION REGULATIONS 2014

The intended construction work falls within the scope of "construction work" as defined in the Construction Regulations, 2014 made under the Occupational Health and Safety Act 1993, as amended ("OHS Act")

7. PERMIT TO WORK

Where the construction works:

- (i) Exceeds 180 days;
- (ii) Involves more than 1800 person days of construction work; or
- (iii) The works contract is equal to or exceeds R13 Million or Construction Industry Development Board grading level 6 CSIR as the client, must at least 30 days prior to construction work; apply to the DoL for a construction work permit in the form of CR Annexure 1.

8. NOTIFICATION OF CONSTRUCTION WORK

- The principal Contractor shall notify the local relevant Provincial Director of the Department of Labour, before commencing with construction work, of the intended work in the form of Annexure 2 of the Construction Regulations.
- A copy of the completed Annexure 2 of the Construction Regulations, as well as proof of notification shall be included in the Health and Safety Plan. (Proof of fax or proof of hand delivery)
- A copy of the completed Annexure 2 is to be kept on site by the Principal Contractor.

9. LEGAL DOCUMENTATION/APPOINTMENTS

The following documents must be provided in the Health and Safety Plan (H&SP):

 Health and Safety Policy signed by CEO or statement of commitment to SHE

- Letter of good standing with the Compensation Commissioner, Federated Employers or similar insurer.
- HSE Organogram (or table), outlining the HSE Team, as well as the appointment(s) they have under the Act and Regulations (reference to specific section/regulation applicable to appointment)
- The competency of each member of the HSE Team must be provided and should include knowledge, training, experience & qualifications specific to the appointment.

Signed copies of the following legal appointments must be provided in the Health, Safety and Environmental Plan:

APPOINTMENT	OHS-ACT / REGULATION REFERENCE
Section 16.2 appointment	Section 16.2
HSE Representative (if necessary)	Section 17(1)
Incident Investigator	GAR 9(2)
First Aiders	GSR 3(4)
Fire Fighters	ER 9 & CR 29
Risk Assessor	HCS Reg (Incl. Asbestos & Lead); CR 9

The following information must be provided in the H&SP:

Indicate the estimated number of employees to be working on site.

 Indicate the expected number of sub-contractors to be appointed by the Principal Contractor.

The following competent persons, **where applicable**, shall be appointed in writing by the Principal Contractor, prior to any work being carried out, and shall adhere to the requirements of the specific sub-regulations.

The competency of each of these appointed competent persons must be provided and should include knowledge, training, experience & qualifications specific to the appointment.

The table below indicates the applicability of the appointments but contractors should by no means be limited to these indications.

APPOINTMENT	OHS-ACT / REGULATION REFERENCE
Construction Manager	CR 8 (1)
Assistant Construction Manager	CR 8 (2)
Construction H&S Officer where applicable	CR 8 (5)
Construction Supervisor	CR 8 (7)
Construction Assistant Supervisor	CR 8(8)
Risk assessor	CR 9(1)
Fall Protection Competent Person	CR 10 (1)
Temporary works competent person	CR12 (2)
Excavation Work Supervisor	CR 13 (1)(a)

Demolition Work Competent Person	CR 14 (1)
Competent Person (Use of Explosives for Demolition Work)	CR14(11)
Scaffolding Erector/ Team Leader/ Inspector	CR 16 (1)
Suspended platform Competent Person	CR 17(1)
Rope Access Work Competent Person	CR 18 (1) (a)
Material Hoist Competent Person	CR 19(8)(a)
Bulk Mixing Plant Competent Person	CR 20 (1)
Explosive Powered Tools Competent Person	CR 21(2)(b)
Construction Vehicle and Mobile Plant Competent Person	CR23 (1)(d)
Electrical Machinery Competent Person	CR 24 (c)
Stacking and Storage Supervisor	CR 28 (a)
Fire Equipment Inspector	CR 29(h)

- Indicate in the H&SP, which of these listed appointments are applicable to the construction work in question.
- No work involving any of the listed appointments may be performed without the knowledge and approval of an appointed competent person.

10. GENERAL DUTIES OF PRINCIPAL CONTRACTOR

• The principal contractor will be responsible for co-operation between all contractors to ensure compliance to the OHS –Act and Regulations on site.

- To ensure the above, the Principal Contractor must carry out the following and provide proof of such in his H&SP:
 - Proof that Contractors H&SP has been approved, implemented and maintained.
 - Proof that Contractors are registered with the Compensation
 Commissioner or similar insurer.
 - A comprehensive & updated list of all contractors on site, also indicating the type of work being done.

11. DESIGNER GENERAL DUTIES

The designer of a structure must comply with CR 6 and in particular ensure that cognizance is taken of ergonomic design principles in order to minimize ergonomic related hazards in all phases of the life cycle of the structure such as maintenance and cleaning after completion and commissioning of the structure.

12. POTENTIAL SOURCES OF RISK

The following potential sources of risk to the health and safety of persons on site have been identified, as per the risk assessment which accompanies this health and safety specification, and must, as a minimum, be appropriately addressed by the Principal Contactor's H&SP. In addition, the Principal Contractor must perform its own risk assessments to enable it to take precautions to protect the health and safety of persons on site, to comply with the Principal Contractor's obligations under the Act and all Regulations made there under, including the Construction Regulations. All such precautionary measures and procedures must be included in the Principal Contactor's H&SP, which must be submitted to the Client for review and approval and where applicable should include:

- Noise
- Potential presence of asbestos that forms part of the structure (cement fibre)
- Dust
- Working at height (fall protection)
- Drilling (Breaking of walls)
- Formwork and support work
- Scaffolding
- Construction vehicles and mobile equipment
- Electrical installations and electrical machinery
- Housekeeping
- Stacking and storage practices
- Fire risks and fire precautions
- Use of jackhammers
- Hot work (steel cutting and welding)
- Portable electrical tools
- Intoxicated persons on site
- Use of ladders
- Impact of construction work upon occupants of buildings not evacuated for the duration of the work
- The risk assessment to be included in the H&SP must clearly indicate:
 - The methodology used to do the risk assessments.
 - Breakdown of processes and activities covered.
 - Subsequent hazards identified
 - Risk calculations (considering consequence, frequency and likelihood)
- All risk assessments are to be conducted by a competent person as appointed under paragraph 9 of this document. The plan must include a declaration in this regard or the risk assessment must contain the signature(s) of this appointed persons.

- Risk assessments are to cover safety as well as health hazards and shall include environmental risks.
- The contractor must be provided with available information about site services and their location, e.g. underground services by the CSIR Project Manager. The CSIR Project manager must further provide any information about ground conditions and underground structures or water courses, such as culverts, where this might affect the safe use of plants such as cranes or the safety of groundwork e.g. in the construction of trenches.

13. SAFE WORK PROCEDURES

13.1 Health and Safety

The following Safe Work Procedures are to form part of the HSE Plan and must be compiled for all the above-identified activities, and that is:

- 13.1. Conduting and trunking
- 13.2. Cabling
- 13.3. Installation of field devices
- 13.4. Installation of control equipment
- 13.5. Core drilling

The safe work procedures must address the following elements:

- The work method to be followed to conduct work safely
- Control measures implemented to mitigation & reduce the risks
- Responsibilities of competent persons
- Required personal protective equipment
- Correct equipment/tools/machinery to be used
- Completed Risk Registers
- Completed Risk Assessments

12.2 Environment

12.2.1Pollution

Any impacts on the environment must be minimized, environmental pollution prevented, efficient use of natural resources and conserving biodiversity during the duration of the contract.

12.2.2 Resource use

Consideration must also be taken for the following;

- Waste minimization
- Energy and water efficiency
- Prevention of water and soil contamination
- Managing air emissions

14. SAFETY OF PEDESTRIANS

Access to the construction site must be cordoned off as much as possible in all work areas.

All excavations are to be fenced / barricaded to prevent access by public / pedestrians.

Work must be planned in such a manner as to ensure that the minimum amount of trenches are left open after hours or during weekends.

No trenches in which water has accumulated may be left open.

15. REGISTERS

- Examples of the registers listed below must be provided in the H&SP.
- All registers must be available at the site offices at all times for inspection.
- The list of registers to be kept is by no means exhaustive and the H&SP should list all the registers that are applicable and at what frequency they are going to be maintained.

ACTIVITY	FREQUENCY	FORMAT
Form work / Support work	Daily, prior to any shift	
Excavation work	Daily, prior to any shift, after	
	rain or blasting or after	
	unexpected fall of ground	
Scaffolding	Daily, prior to any shift, after	
	Rain or blasting.	
Material hoist	Daily	
Construction vehicles and mobile plant	Daily	
Temporary electrical installation	Weekly	
Stacking	Weekly	
Ablution facilities	Weekly	
Ladders	Weekly	
Incident register in terms of GAR 9	As Required	Annexure 1
		WCL 2
Fall protection equipment	Daily	
Portable electrical tools	Weekly	
Suspended platforms	Daily	
Accommodation of traffic	Daily	
Firefighting equipment	Weekly	
Hand tools	Weekly	
Visitor induction	Daily	
Proof of medical surveillance for every	As Required	Annexure 3 of CR

construction worker has been done	

16. TRAINING

Each H&SP shall indicate the following regarding training:

- A copy of the content to be used for Induction training.
- Attendance registers must be included as proof of training provided for:
 - Induction training
 - Safe work procedure training
 - Risk assessment outcome training
- Method of informing visitors and other persons entering the site of hazards prevalent on site.
- Method of providing personal protective equipment to visitors and nonemployees.
- Methodology to be used in the issuing and communication of written instructions/safe work procedures.

17. HEALTH AND SAFETY AUDITS AND INSTRUCTION REGISTER

 Health and safety audits will be conducted by the client at intervals mutually agreed between the client and principle contractor but at least monthly. All Health and Safety instructions will be given via the Safety Office in writing within 7 days of audits. The Principal Contractor shall be required to sign the instruction to acknowledge any instructions issued and rectify the deviations.

18. GENERAL REQUIREMENTS

18.1. Personal Protective Equipment

 The procedures for issuing and control over PPE shall be indicated in the H&SP, as well as the enforcement for the wearing thereof.

18.2. Hired Plant

 The responsibility for the safe condition and use of all hired plant shall be that of the contractor.

18.3. Transport of Employees

 Transport of employees shall be carried out in terms of the National Road ordinances. The H&SP shall detail the arrangements and methods of the transportation of workers.

18.4. Signs

 The Principal Contractor shall indicate in his H&SP the arrangements regarding the posting of danger signs.

18.5. Certificates of fitness

 The Principal Contractor and the subcontractors shall include in their Health and Safety files all copies of the worker's medical certificates of fitness conducted by an Occupational Health Medical/Nursing Practitioner.

18.6. Site Visitors

- A site visitor's register is to be kept on site and steps are to be taken to ensure that all visitors sign the visitors' register before entering the site.
- An induction must be given to all visitors entering the site and proof thereof must be kept in the health and safety file.
- Visitor's PPE must be made available and at the cost of the contractor.
- A sign should also be provided directing all visitors to report to the site office.

18.7 Housekeeping

- CR 27 and CR 28 shall be complied with regarding sustained provision of good housekeeping, stacking and storage practices.
- Chutes shall be used for waste and debris removal from high places.
- The site shall be suitably cordoned off and access controlled.
- Catch platforms or nets shall be used where necessary.

18.8 Welfare Facilities

- The Contractor will ensure that adequate ablution and changing facilities are made available to the workers.
- The Contractor will also provide appropriate hygienic eating facilities for the workers.

19. HAZARDOUS CHEMICAL SUBSTANCES

In addition to the requirements in the HCS Regulations, the principal contractor must provide proof in the H&SP that:

- Material Safety Data Sheets (MSDS's) of the relevant materials/hazardous chemical substances are available prior to use by the contractor. Mention should be made how the principal contractor is going to act according to special/unique requirements made in the relevant MSDS's. All MSDS's shall be available for inspection by the client at all times.
- Risk assessments must be done for this construction project.
- Exposure monitoring where required shall be undertaken by an AIA and that the medical surveillance programme is based on the outcomes of the exposure monitoring.
- How records are going to be kept safe for the stipulated period of 30 years.
- How the relevant HCS's are being/going to be controlled by referring to:
 - Limiting the amount of HCS
 - Limiting the number of employees
 - Limiting the period of exposure
 - Substituting the HCS
 - Using engineering controls
 - Using appropriate written work procedures
- The correct PPE is being used.
- HCS are stored and transported according to SABS 072 and 0228.
- Training with regards to these regulations was given.

 The H&SP should make reference to the disposal of hazardous waste on classified sites and the location thereof (where applicable).

20. ASBESTOS

Given the age of our buildings within the CSIR, it is assumed that asbestos may well form part of the structure of our buildings. Where refurbishment is going to occur, it must be established through sampling whether asbestos forms part of the structure or not before proceeding with any building work. If asbestos is present, the following must be included in the H&SP.

- Notification to the Provincial Director in writing, prior to commencement of asbestos work.
- Proof of a structured medical surveillance programme, drawn up by an occupational medicine practitioner.
- Proof that an occupational health practitioner carried out an initial health evaluation within 14 days after commencement of work.
- Copies of the results of all assessments, exposure monitoring and the written inventory of the location of the asbestos at the workplace.
- Only proof that medical surveillance has been conducted and not the actual medical records as these are of a confidential nature.
- How records are going to be kept safe for the stipulated period of 40 years.
- Proof that asbestos demolition (if applicable) is going to be done by a registered asbestos contractor and provide proof that a plan of work for such demolition is submitted to an Approved Asbestos Inspection Authority 30 days prior to commencement of the demolition.

 Provide proof that the plan of work was approved by the asbestos AIA and submitted to the provincial director 14 days prior to commencement of demolition work together with the approved standardised procedures for demolition work.

21. NOISE INDUCED HEARING LOSS

Where noise is identified as a hazard the requirements of the NIHL regulations must be complied with and the following must be included/ referred to in the HSE Plan:

- Proof of training with regards to these regulations.
- Risk assessment done within 1 month of commencement of work.
- That monitoring carried out by an AIA and done according to SANS 083.
- Medical surveillance programme established and maintained for the necessary employees.
- Control of noise by referring to:
 - Engineering methods considered
 - Admin control (number of employees exposed) considered
 - Personal protective equipment considered/decided

22. LIGHTING

Where poor or lack of illumination is identified as a hazard the lighting regulations must be complied with and the following must be included in the H&SP:

 How lighting will be ensured/ provided where daylight is not sufficient and /or after hours are worked.

- Planned maintenance programme for replacing luminaries.
- Proof of illumination levels of artificial illumination equipment.

23. FALL PROTECTION

In addition to the requirements of this regulation the following shall apply:

- The fall protection plan for all roof work is to be prepared by a competent person. This competent person must sign the fall protection plan.
- Contents of the fall protection plan must cover <u>all the requirements</u> as stated in the sub-regulation.
- The level of supervision is to be stated in the fall protection plan.
- Medical certificates, work near edges, presence of dew, dangerous walking areas etc. should be addressed in the fall protection plan.
 Inclement weather conditions must be provided for in the fall protection plan.

24. HEALTH AND SAFETY PHILOSPHY

The client is required to ensure a working environment which, as far as reasonably practicable, is safe and without risk to the health persons on the site.

23.1 Contractor health and safety management system

The Principal Contractor will ensure and demonstrate to the Client that he, and all contractors to be appointed on this construction project, has adequately

allowed for the cost of health and safety measures which may be required during the construction work.

23.2 Client's Health and Safety Department

The Clients Safety Department will visit the site regularly to monitor and audit the execution of the contractor's H&SPs on behalf of the Client, without thereby limiting the contractor's own responsibility for health and safety, or attracting any vicarious responsibility or liability for the contractor's acts or omissions.

23.3 Occupational Health and Safety Act Section 37(2) agreements

The Principal Contractor as well as all contractors must sign the Client's Section 37(2) agreement before commencement of their particular work.

23.4 Contractor Health and Safety Plans

Each contractor and sub-contractor working on the site must prepare a H&SP to address and manage all applicable sources of risk as per items under Section 11 of this specification as well as any other sources of risk which are identified during the contractor's own risk assessment. The Principal Contractor shall incorporate these into a single H&SP for the execution of the entire contract works. Should any further risks be identified in the course of the construction work, such risks must be assessed and addressed in amended H&SP which must then be submitted to the Client for approval.

23.4.1 The H&SP must also address the following matters:

- Procedures for compliance with all requirements of the OHS Act and in particular Sections 8 and 9 of the Act.
- Undertaking and procedure to stop any work which endangers the safety or health of any person.
- Systems for recording and reporting of incidents both internal and external to the Department of Labour.

- Copy of the Act and its Regulations to be kept on the site and to be readily available to employees.
- Incident registers to be kept on the site.
- Employment and appointment of any people who are competent and have the necessary knowledge, training, qualifications and experience to perform the required construction work safely and effectively.
- Procedures and arrangements for first aid facilities on the site.
- Procedures and arrangements for prompt reporting of injuries and other losses/incidents.
- Emergency plans to deal effectively with potential site emergencies.
- Use of effective processes for the identification and close out of root causes of incidents and accidents.
- Attendance by all contractors of monthly site health and safety meetings.
- Demonstration by all contractors of their health and safety monitoring and auditing system to ensure compliance with their H&SP, as part of their H&SP.
- If construction work is going to be undertaken while the building is still
 occupied, methods of limiting the impact upon occupants with noise, dust
 and other nuisance factors.
- Occupational Health and Safety Protocol.

23.5 General

- Nothing contained in or omitted from this Health and Safety Specification, or the H&SP based on this specification, shall relieve the Principal Contractor of any of its obligations or liabilities.
- The client shall not be liable for any civil claim because of anything contained in or omitted from this Health and Safety Specification.

NB: Upon completion of the construction work and must, a principal contractor, hand over to the Safety Department, a health and safety file including a record of all drawings, designs, materials used and other similar information concerning the completed structure, in accordance to Construction Regulations 7(1) (e).

Should you require any further information please don't hesitate to contact the CSIR Safety Department;

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