ENVIRONMENTAL HEALTH AND SAFETY MANAGEMENT PLAN

(EHSMP) FOR THE CONSTRUCTION OF LOW AND MEDIUM

VOLTAGE LINES UNDER SUB-PROJECT OF PRODUCTIVE USES

IN RWANDA.

## **Submitted to:**

## **Energy Development Corporation Limited (EDCL)**

**Electricity Access Roll-Out Programme (EARP)** 

Rwanda Electricity Sector Strengthening Project (RESSP)



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## 0. List of abbreviation

**CEC: Century Engineering Company** 

**EDCL: Energy Development Corporation Limited** 

ESF: Environmental and Social Framework

ESS: Environmental and Social Standard

HSMP: Health and Safety Management Plan

HSMS: Health and Safety Management System

JHSA: Job Health and Safety Analysis

IFC: International Finance Corporation

**HS: Health and Safety** 

STD: Sexually Transmitted Diseases

PPE: Personal Protective Equipment

SWMS: Safe Work Method Statements

**WOC: Walk Observe Communicate** 

## 1. Introduction

## 1.1. EHSP objectives

The objectives of this Environmental Health and Safety Plan for the construction of low and medium voltage lines for productive uses in 15 administrative Districts of Rwanda are as follows:

- Promote a safe work environment free from recognized hazards to workers, the environment and the public. Commit resources to detect hazards and ensure hazard correction.
- Achieve an incident-free project by advocating the belief that all incidents are preventable.
- Encourage consultants and contractors selected to work on this project to share and promote that same belief.
- Verify that occupational health and safety policies and procedures are in place to assure worker
   and public health and safety as well as to promote natural capital.
- o Ensure good hygiene and cleanliness working sites.
- Enlist employee involvement with project safety to improve the quality of safety and health.
   This includes brainstorming, inspecting, detecting and correcting, from project startup to project completion.
- Ensure that all employees, consultants, and contractors have the knowledge, awareness, and training to accomplish the task ahead
- Implement emergency response plans and procedures. Provide effective project communication plans and equipment.
- Promote fair and equitable labour practices for the fair treatment, non-discrimination and equal opportunity of workers;
- Protect workers' rights and promote healthy, safe, secure and comfortable accommodation that does not impact negatively on the communities in the surrounding area;
- Ensure the management and control of activities that may pose labour-related risks at workplaces.

It is to provide a summary of the procedures that will apply during the project implementation in order to manage the Health and Safety on site. The plan is based on the policies and procedures of CEC's management system and references should be made to these policies and procedures for further details.

#### CEC will:

- Make this plan available to all workers on this project and ensure they have the opportunity to read, understand, clarify and ask questions
- Keep a copy of the Health and Safety Plan readily available for the duration of the project or longer as required under the laws of Rwanda
- Review the plan regularly throughout this project and make any revisions known to those working on the project
- Promote and enhance the focus on safety and lead by example with evaluating, anticipating,
   minimising and controlling high risk activities.
- Prepare implementation report on a monthly basis.

## 1.2. CEC Occupational Health and Safety System

CEC Ltd is committed to providing a safe environment for all employees and has in place a Health and Safety Management Systems (HSMS) that is in accordance with the National Health Policy (2016), National Sanitation Policy (2016), National Occupational Health and Safety Strategy (2019), Law n° 66/2018 of 30/08/2018 regulating labour, Ministerial Order determining modalities of establishing and functioning of occupational health and safety committees (2012) and the Ministerial Order determining conditions for occupational health and safety (2012). Throughout the project and in line with the HSMS, safety performance will be continuously monitored and work instructions reviewed with the aim of eliminating risk as far as is reasonably practicable.

## 2. Project Details

## 2.1. Project Scope and description

The low and medium voltage lines for productive uses in Rwanda will focus on subprojects of productive users and will cover 57 individual productive uses such as: Milk Collection Centers (MCC), Water Pumping Stations (WPS), Health Facilities, Administrative offices and Schools which are distributed in 4 Provinces (Eastern, Southern, Northern and Western) covering 15 districts namely: Gakenke, Gatsibo, Huye, Kamonyi, Kayonza, Kirehe, Muhanga, Musanze, Ngoma, Ngororero, Nyagatare, Rubavu, Ruhango, Rutsiro and Rwamagana. The details of the description and components are detailed in the paragraphs below.

#### 2.1.1 Eastern Province

#### Location

In the Eastern Province, the project shall be implemented in 6 districts of Gatsibo (Rugarama and Kageyo Sectors), Kayonza (Ndego and Mwiri Sectors), Kirehe (Mpanga, Kigarama and Nasho Sectors), Nyagatare (Rwimiyaga and Karangazi Sectors), Ngoma (Mutenderi Sector) and Rwamagana (Kigabiro Sector).

#### **Subprojects**

In the Eastern Province, the project shall be comprised of the following sub projects:

- o 1 Cell office
- 1 Primary School
- o 1 Sector Office
- 8 Water Pumping Stations
- 4 Health Centers
- 2 Health Posts
- 1 Milk Collection Center

#### 2.1.2 Southern Province

#### Location

In the Southern Province, the project shall be implemented in 4 districts of Kamonyi (Kayumbu, Mugina, Nyamiyaga, Rukoma, Rugarika ans Kayenzi Sectors), Muhanga (Kabacuzi, Rugendabari, Kibangu, Kiyumba, Nyamabuye and Rongi Sectors), Huye (Rwaniro and Mbazi Sectors) and Ruhango (Kinihira Sector).

#### **Subprojects**

In the Southern Province, the project shall be comprised of the following sub projects:

- 13 Secondary Schools
- 2 Water Pumping Stations
- o 3 Health Centers
- o 2 Health Posts
- 1 Primary School
- o 2 Sector Office

o 1 Milk Collection Center

#### 2.1.3 Northern Province

#### Location

In the Northern Province, the project shall be implemented in 2 districts of Musanze (Gataraga, Cyuve, Shingiro and Gacaca Sectors) and Gakenke (Minazi, Busengo, Minazi, Mugunga and Rusasa Sectors).

## **Subprojects**

In the Northern Province, the project shall be comprised of the following sub projects:

- o 6 Cell Offices
- 1 Secondary School
- o 2 Water Pumping Stations

#### 2.1.4 Western Province

## Location

In the Western Province, the project shall be implemented in 3 Administrative districts namely Ngororero (Muhanda and Matyazo Sectors), Rubavu (Kanzenze Sector) and Rutsiro (Murunda and Gihango Sectors).

## Subprojects

In the Western Province, the project shall be comprised of the following sub projects:

- 1 Milk Collection
- 2 Secondary Schools
- 2 Health Centers

## 2.2. Company organization and personnel

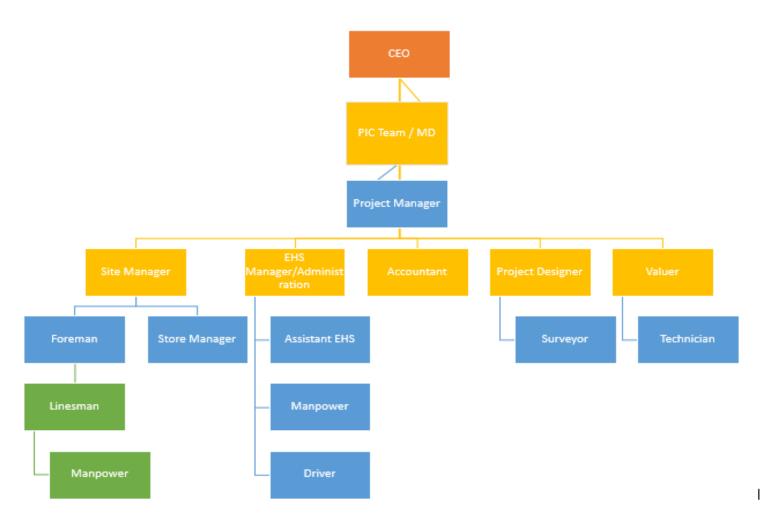
The contractor is Century Engineering Contractors Limited (CEC Ltd) and is a subsidiary of EPC Africa Group which is based in Kigali. CEC Ltd is specialized in High Voltage Transmission Lines Construction and rendering technical services to the energy and infrastructure sectors in Africa. The Group focuses in engineering, procurement, Construction, power generation, transmission and distribution.

The Company combined Vision and Mission are to build affordable Energy and Tele-Communication infrastructures to all corners of the Liveable Environment on the African Continent. CEC Ltd has vast experience in the following core activities: Construction Project Management, Compliance and Quality

control, Project Supervision, Turnkey project, Conceptual and preliminary design, leading in health, safety and environmental performance, Delivering on our promises and client vision and Systems reengineering review and audit. At the project level there will be one Project Manager, four Project Engineers, one Environmental Health and Safety Expert who will work countrywide in the different districts.

## 2.3. Company organizational chart

# **Project Team**



# 3. Project risks identification and assessment

## 3.1 Introduction

The provision of safe, reliable and affordable power supply is one of the most important cornerstones for economic development. The risks range from minor to major risks such serious body injuries to fatalities; some of which have a cascading effect to dependents of the affected. Hence, electricity supply construction and installation are considered to be high risk.

Risk assessment refers to the process that identifies the risks/hazards associated with particular activities/tasks on electricity sites, evaluates the effects and estimate risks / hazard or aspects of exposure to these risks/hazards.

A Risk Assessment is an important tool for the management of transmission and distribution companies to use in evaluating the security and safety of the project implementation.

## 3.2 Aim of the risk identification and assessment

The aim of risk assessment and management approach is to identify, assess and mitigate risks where possible and to continually monitor risks throughout the project implementation as other risks or threats emerge or a risk's impact or likelihood changes.

## 3.3 Objectives of the risk identification and assessment

The risk assessment will provide CEC project management and implementation staff with the capability to:

- o Provide an adequate level of protection for employees, equipment and facilities,
- Meet national laws and policies related to electricity supply projects,
- o Establish an acceptable level of risk.
- Advice project management and neighboring communities at all levels
- Proper monitoring and compliance

Enforcement of the laws, policies and guidelines related to environmental health and
 Safety

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## 3.3 Identified risks and control measures

Activity	Risk	Affected	Degree of	Control measure	Responsible
			risk		
Survey works	Sliding or falling	Survey team	Medium	First Aid Kit available on site	Site engineer
	workers due to	All workers		Trained first aid personnel	Foreman
	steep areas.			Wear proper PPEs	HS Officer
	Venomous	Survey team	Low	<ul> <li>First Aid Kit available on site</li> </ul>	Site engineer
	snakes and	All workers		<ul> <li>Trained first aid personnel</li> </ul>	Foreman
	rodents			Wear proper PPEs	HS Officer
				Clear vegetation and shrubs away from working	
				area	
				<ul> <li>To pay attention and be vigilant</li> </ul>	
Transportation	Improper	Drivers	High	Limited personnel should be transported at once	Site engineer
of personnel,	loading and	Operators		<ul> <li>Use proper equipment for loading and unloading</li> </ul>	Foreman
materials and	unloading	All workers		<ul> <li>Safe loading of vehicles on the load capacity</li> </ul>	HS officer
equipment		Pedestrians		<ul> <li>Qualified and trained operators and drivers</li> </ul>	
	Overturn of	Drivers	High	Qualified and trained operators and drivers	Site engineer
	vehicles	Operators		<ul> <li>Speed limits on sites and roads</li> </ul>	Foreman
		All workers		Safe loading of trucks	HS officer
				Maintenance of access roads,	

				<ul><li>Wear proper PPEs</li></ul>	
Working at	Positioning of	All workers who	High	Position the ladder on solid ground	Site engineer
heights	ladder and	works at height		o Fall arrest methods such as lanyards and fall	Foreman
	falling from			arresters,	HS officer
	heights			○ Wear proper PPEs (safety harness, hard hats,	
				visible vest, gloves and safety shoes)	
	Effects of wind	All workers who	High	Only trained technicians	Site engineer
	speed	works at height		o Proper PPEs	Foreman
				When wind it very high, stop the works	HS officer
	Falling from	All workers who	Intolerable	Only trained technicians	Site engineer
	height due to	works at height		o Proper PPEs	Foreman
	physical fatigue			o Fall arrest methods such as lanyards and fall	HS officer
				arresters,	
				Workers will not work for a long time at height and	
				every two hours to take a short break or shift	
				Available drinking water at the work place	
				Toolbox talks	

Falling from	All workers who	High	<ul> <li>Only trained technicians</li> </ul>	Site engineer
height due to	works at height		o Proper PPEs	Foreman
negligence o	F		o Fall arrest methods such as lanyards and fall	HS officer
workers			arresters,	
			O Do not smoke, eat, drink, or use the phone during	
			working at height	
			<ul> <li>Communication will be with hand radio</li> </ul>	
Object falling	g All workers	Intolerable	<ul> <li>Do not work below the workers who work at height</li> </ul>	Site engineer
from height			<ul> <li>Barricaded areas with red and white warning tape</li> </ul>	Foreman
			<ul> <li>Communication with hand radio,</li> </ul>	HS officer
			o Proper PPE (safety harness, hard hats, safety	
			shoes, gloves, visible vest)	
			o Toolbox talks	
Bad weathe	All workers	Intolerable	Weather condition shall be regularly monitored	Site engineer
conditions (rain	,		<ul> <li>Work must be stopped during bad weather</li> </ul>	Foreman
storm, heavy	<i>,</i>		conditions	HS officer
wind, ice, heavy	<i>,</i>			
cloud weather)				
Improper type	e All workers	High	<ul> <li>Visual check of the tools before starting work,</li> </ul>	Site engineer
of tools			<ul> <li>Remove all damaged tools</li> </ul>	Foreman
			○ Use proper tools	HS officer

				<ul> <li>Proper PPE (safety harness, hard hats, safety shoes, gloves, visible vest)</li> </ul>	
				sinces, gioves, visible vest,	
Working with	Improper	All workers	High	<ul> <li>Store materials and tools in proper place,</li> </ul>	Site engineer
hand tools	storage of			o Proper PPE (safety harness, hard hats, safety	Foreman
	materials and			shoes, gloves, visible vest)	HS officer
	tools			o Toolbox talks	
Emergency	Accident or	All workers	High	o Any team must have a first aid person for any	Site engineer
response, First	incident cured			incident / accident case that might be on site	Foreman
Aid team	on site			<ul> <li>First Aid Kit available on site</li> </ul>	HS officer
				All emergency contacts must be exposed where	
				can be seen by all team workers	
				Available drinking water	
Puller/	Position	Operators	Medium	Position the Puller/Tensioner in solid ground	Site engineer
Tensioner		All workers		<ul> <li>Anchorage Puller / Tension for Proper load</li> </ul>	Foreman
				<ul> <li>Trained and certified operators only</li> </ul>	HS officer
				<ul> <li>Visual control by the operator before starting work</li> </ul>	
	Puller /	Operators	Intolerable	o Tool box Talks	Site engineer
	Tensioner	Workers		<ul> <li>Puller/tensioner must be visually and mechanical</li> </ul>	Foreman
	failure during			periodically inspected before using them from	HS officer
	stringing			authorized operator,	

				<ul> <li>To not standing any person under the line under stringing activity,</li> <li>Proper PPE (safety harness, hard hats, safety shoes, gloves, visible vest)</li> </ul>	
The passage of	Venomous	All linesmen	High	<ul> <li>First Aid Kit available,</li> </ul>	Site engineer
ropes	snakes	workers		<ul> <li>Trained first aid personnel</li> </ul>	Foreman
				o Proper PPE (safety harness, hard hats, safety	HS officer
				shoes, gloves, visible vest)	
Stringing and	Failure of	Operators	High	All pulleys to be checked before use,	Site engineer
sagging	pulleys	Workers		<ul> <li>All pulleys to be installed in proper way,</li> </ul>	Foreman
				<ul> <li>Trained personnel,</li> </ul>	HS officer
				o To not standing any person under line during	
				stringing	
	Intersection and	Operators	Intolerable	o Switch of existing overhead power lines and	Site engineer
	nearest with	Workers		earthing in both substations by authorized person	Foreman
	existing			<ul> <li>Trained personnel,</li> </ul>	HS officer
	overhead power			Earthing conductor.	
	lines				
	Crossing	Drivers	Intolerable	Trained personnel	Site engineer
	national roads	Operators			Foreman

		Workers		<ul> <li>To not stand any person and vehicles under in crossing way</li> <li>Tool box talks before stat of the job</li> </ul>	HS officer
Housekeeping	Spills incident such as oil or fuel	All workers	Medium	<ul> <li>Immediately clean up using spill kid or inert sand,</li> <li>All materials used to mop up spills will be immediately removed to a safe place and store in closed containers for safe disposal from site to a safe area.</li> </ul>	Site engineer Foreman HS officer
	Materials stacked inappropriately Garbage	All workers  All workers	Medium	<ul> <li>Store all materials in proper place</li> <li>Assign a person for the store, its cleanliness and safety</li> <li>Recycle bins available on site</li> </ul>	Site engineer Foreman HS officer Site engineer
	Sursuge	7 m workers	2011	<ul> <li>Collection and disposal of the wastes to approved areas by the Districts</li> </ul>	Foreman HS officer

## 4. Implementation Plan and Methodology

CEC will take care on Incident notification, Investigation and Reporting.

#### A. Incident Notification

The Project Management shall be verbally notified by the site management team as soon as possible of incident on the project that causes the death of a person. In less than 24hours shall be notified in writing (preliminary report). The Project Management shall in turn inform the Client/Client Representative verbally and a written notification sent (Final report) in less than 24 hours. Work shall be stopped in case of a serious incident. An incident report template is annexed.

## B. Incident Investigation

- i. An incident investigation should begin immediately after the emergent crisis is controlled.
- ii. First ensure that the incident scene is safe for emergency responders; and provide appropriate care to all injured persons. Call for additional resources to care and transport the injured parties as needed.
- iii. A written incident investigation report (Annex 1) shall be completed by the jobsite supervisor.
- iv. Each incident shall be investigated to the degree necessary by the personnel designated by the Project Management. Each investigation shall result in a report of the incident and the corrective action taken to prevent this from happening again.
- v. Physical evidence should be preserved to the fullest extent possible until the investigation is complete. This can be achieved by barricading the accident scene and instructing workers to stay away from the scene, and stop all works.
- vi. Work should not be resumed in the area until a directive from the investigating person in charge is received.
- vii. Incidents other than minor injuries that are easily treatable on the job, photographs should be taken of the incident scene and any equipment involved as soon as possible after the event.

- viii. Investigators should identify those persons who were eye witnesses (primary witnesses) or who claimed to have seen or have knowledge of the incident (secondary witnesses). The identity of each witness should include their name, address, telephone number, and employer and site location.
- ix. Investigators should also obtain facts such as time of day, conditions, weather, temperature, wind, and other details that are requested on the report forms
- X. Through interviewing the witnesses, obtain information regarding how the incident happened. The purpose of the investigation is to obtain facts, not assess blame.
- xi. Concentrate on the facts; find out "who, what, where, when, why and how." After obtaining necessary information, the incident investigation report should be completed (Final Incident Report) a copy of which shall be sent to client representative Project Manager.
- xii. In case a worker gets injured during the incident and dies, then the employer of the worker shall notify the area Labour office within 24 hours. However, where there is no fatality, The Labour office shall be notified in writing before 7 days' elapse.
- xiii. When an accident in a workplace, causes the death of a person therein, the employer shall:
  - Inform the area Labour Office in less than 24 hours of the occurrence of the accident and,
  - Send a written notice of the accident in the prescribed form to the area Labour
     Office within seven (7) days of the occurrence of the accident.

## C. Incident Review and Root Cause Analysis

- The incident report should be completed immediately after the incident has been brought to its conclusion.
- ii. This report will be used to perform root cause and causal factors analysis. This causal analysis team will be led by the HS Staff and will include the crew leader and manager whose team was involved in the incident.
- iii. The results of this process, lessons learned and corrective actions shall be shared in a formal report.

## **D.** Incident Report

- The incident report should be placed in the jobsite incident file with copies faxed or emailed to the company's main office.
- ii. Jobsite supervisors are responsible to see that the reports are completed and a root cause analysis is done on any significant incident.
- iii. All corrective actions identified shall be implemented and verified by the siteManager.
- iv. Project Manager shall ensure that the corrective actions are completed.
- v. In certain circumstances additional personnel from our customer's staff, insurance personnel, attorneys, regulatory agency personnel or police officers may also be part of the investigating team. All Project personnel are directed to assist with the legal requests for information from these parties. Please cooperate with the requests of these personnel, if there are any questions direct them to the HS Manager.
- vi. All serious incident reports will be retained for a minimum of at least three (3) years beyond the date of the end of the investigation.

## E. Incident Compensation

- The approved reports on injuries and root causes analysis shall be used to compensate the injured workers;
- ii. The compensation shall be provided as per insurance scheme of the Contractor and contract between the contractor and workers.
- iii. The lost working day due to occupational hazard shall be paid in full to the concerned worker.

# 4. Health and safety roles and responsibilities

# 4.1. Details of persons on the project with Health and Safety responsibilities

POSITION	RESPONSIBILITIES			
	Managerial leadership and commitment to safe systems of			
Project Manager	work for all site activities. Monitoring and enforcing			
1 Toject Wanager	compliance with site and legislative requirements. Promote a			
	health and safety culture			
	Management of site personnel and contractors: involvement			
Construction	in the development and maintenance of safe systems of work			
Manager	to manage risks so that the site and legislative requirements			
	are being applied			
	Worker and contractor consultation encouraging site health			
	and Safety implementation and ownership within the care and			
	maintenance team			
	Review and promote all safe systems of work in accordance			
	with the safe work method statements (SWMS) and Job Safety			
	and Health Analysis (JSHA) developed on the project, ensuring			
HS Manager	that all practices to be undertaken are carried out to the			
	applicable legislation and site rules. Undertaking frequent site			
	inspections and audits.			
	Carry out toolbox meetings, induction training, sites rules			
	clarification and awareness on STD, Ebola and Malaria.			
	Ensure condoms are provided on site on regular basis at well			
	designated areas such as the toilets.			
	Actively apply the rules and requirements of this HSMP, site			
Varying Roles	requirements and all legislative requirements described in the			
	HSMP and regulations			

## 4.2. CEC's responsibilities

CEC shall be responsible for:

- Preparing, updating and implementing this EHSMP, including all associated procedures,
- o Identifying and observing all relevant legal HS requirements
- Managing risks associated with the carrying out of construction or demolition work in accordance with the HS Act and Regulation.
- o Reviewing SWMSs and SHAs prepared by contractors on the project
- Planning to do all work safely
- Identifying HS training required for an activity
- o Verifying that workers have undertaken identified HS training
- Communicating and consulting with workers
- o Investigating hazard reports and ensuring that corrective actions are undertaken
- Dispute resolution
- Continual review and monitoring of construction activities, sequence, process and procedures
- Ensuring that the right plant, equipment and personnel to operate are applied to the task
- Follow the safe work method, identify, control and manage risks associated with the task in their job description and compensate for the relevant risks created, associated with the unsafe conditions created in the workplace.
- Investigating and reporting incidents

## 4.3. Subcontractors (If Applicable)

Sub- Contractors engaged for this project by CEC (whenever necessary) are responsible all formatters including:

- o Fulfilling the duties of CEC for their own operations
- Managing risks associated with the carrying out of construction or demolition work
   in accordance with the HS Act and Regulation
- Planning to do all work safely
- Identifying all high risk construction or demolition work associated with their activities and ensuring SWMS and JSHA are developed and implemented

- o Following all safety policies and procedures and site rules
- Complying with this H and S Management Plan
- Complying with any direction given to them by the principal contactor
- Undertaking site-specific induction before starting work and signing off that they have completed this induction
- o Ensuring the workers, they engage undertake site specific inductions
- Ensuring they have the correct tools and equipment and these are in a serviceable condition for the task
- Follow the safe work method and identify and control the risks associated with the task in their job description.

## 4.4. Workers

All workers on this project (including those employed by subcontractors) are responsible for:

- o Taking reasonable care of their own health and safety
- o Taking reasonable care that their conduct does not adversely affect others
- o Complying with instruction, so far as they are reasonably able
- o Cooperating and complying with reasonable notified policies and / or procedures
- Raising concerns where uncontrolled risk is evident and the task cannot be completed safely
- o Reporting any incident or unsafe condition as soon as reasonably practicable
- Assisting in incident investigations (where required)
- Only operating plant and equipment that they hold current certification and Verification of Competency for
- o Presenting to work in a fit condition free from fatigue, alcohol or other drugs.

## 5. Policy and Legal Framework

The Republic of Rwanda has developed laws, policies and strategies; legal instruments and institutional framework for labour, occupational health and safety, sanitation and working conditions. CEC is committed to comply and enforce those laws, policies, strategies and all legal instrument during the construction of the low and medium voltage lines for productive uses in 15 Districts of Rwanda as detailed below.

## **5.1. Legal Framework**

Law/Regulation	Objective	Relevance
/Order		
The	The 2003, revised in 2015 Rwandan	CEC will comply with the
Constitution of	Constitution Articles 45 aim at the	Constitution by implementation
the Republic of	promotion of activities for the good	of applicable laws and ensure
Rwanda, 2003	health. It stipulates that all Rwandans	employees work in a good
as revised in	have the right to good health, everyone	health, clean and safe
2015	has the right to live in a clean and	environment and ensure welfare
	healthy environment and the State also	of all its workers.
	has the duty, within its means, to	
	undertake special actions aimed at the	
	welfare of workers.	
Law Regulating	This law applies employment relations	The electrification project will
Labour in	based on minimum wage, basic salary,	abide in good conducive working
Rwanda, 2018.	on employment contract, prohibited	conditions during the
	work for the child, on forced labour,	implementation of the project.
	conducive working environment for the	Labor law and especially its
	employee and the right to form trade	Article 77 on general health and
	unions and employers' associations.	safety conditions in the
		workplace. This will ensure good
		working conditions and wellness.
		No child will not be employed
		and all forms of discrimination

Law/Regulation	Objective	Relevance
/Order		
		will be avoided during
		recruitment of workers.
Ministerial	This Order determines modalities of	As a good practice, health and
Order	establishing and functioning of	safety will be given a priority by
determining	occupational health and safety	ensure regular toolbox meetings
modalities of	committees.	on health and safety during
establishing and		construction. Health and safety
functioning of		committees will be established
occupational		and governed by this ministerial
health and		order during project
safety		implementation.
committees,		
2012		
Ministerial	This Order determine the general and	As a good practice, health and
Order	specific rules and regulations relating to	safety will be given a priority by
determining	health and safety at workplace in order	ensure regular toolbox meetings
conditions for	to secure the safety, health and welfare	on health and safety during
occupational	of persons at work and protect them	construction. Health and safety
health and	against risks to safety and health arising	committees will be established
safety, 2012	from work	and governed by this ministerial
		order during project
		implementation.

# 5.2. Policy framework

Policy, Plan,	Objective	Relevance
Strategy		
National Health	One of the objectives of Rwanda Heath	CEC Ltd will comply with this
Policy, 2016	Sector Policy is to improve the quality of	policy by ensuring health safety
	life and demand for services in the	and the good working conditions

Policy, Plan,	Objective	Relevance
Strategy		
	control of disease. The policy identifies	and implement awareness
	the most common illnesses as a result of	programme on HIV Aids, STD,
	unhealthy living or working environment.	Malaria and Ebola to workers.
National	NST 1 is the implementation instrument	The implementation of this
Strategy for	for the remainder of Vision 2020 and for	project will contribute to achieve
Transformation	the first four years of Vision 2050 to	NST1 objectives by providing
(NST 1) 2017 -	provide the foundation and vehicle	electricity and employment
2024	towards Vision 2050 through specifically	opportunities hence contributing
	economic and social transformation.	to economic and social
		transformation.
National	The policy provides for decentralization	CEC Ltd will comply with this
sanitation	in line with the national decentralization	policy by ensuring working
policy, 2016	policy, institutional aspects, integrated	conditions of all the workers have
	watershed management, monitoring and	proper sanitation by providing
	assessment and participatory approach	good and clean toilets and
	to water and sanitation among other	cleanliness on site.
	sectoral reforms in Rwanda	
National	It aims at providing a framework for	This policy will govern CEC project
Occupational	coordination of OSH activities among	implementation by establishing
Safety and	public, private, employees organizations	safety and health standards at
Health Strategy,	and civil society institutions	workplace and ensure compliance
2019		with occupational safety and
		health standards.
Environmental	The overall objective of the	CEC will comply with this policy
Health Policy,	Environmental Health Policy is provision	by providing good environmental,
2008	of adequate environmental health	social, health and safety working
	services to all Rwandans with their active	conditions to workers and
	participation.	neighboring residents.

## 5.3. World Bank Environmental and Social Framework (ESF)

Given the implementation timeframe of this project, the old World Bank Operation Policies which were replaced in 2018 by the Environmental and Social Framework (ESF) were not considered.

The new World Bank Environmental and Social Framework (ESF) has 10 key Environmental and Social Standards (ESS) and the construction of low and medium voltage lines for productive uses in 15 Districts of Rwanda shall trigger ESS2 on Labour and Working Conditions.

ESS2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

The Project triggers this policy because the construction of low and medium voltage lines will utilize people in the day to day working on to the projects and these persons need to be treated according to the ESF where the work conditions must meet the required standards.

# 5.4. IFC Environmental, Health and Safety (EHS) Guidelines for Electric Power Transmission and Distribution.

The EHS Guidelines for Electric Power Transmission and Distribution include information relevant to power transmission between a generation facility and a substation located within an electricity grid, in addition to power distribution from a substation to consumers located in residential, commercial, and industrial areas.

*Electric and Magnetic Fields:* the guidelines define the Electric and magnetic fields (EMF) as invisible lines of force emitted by and surrounding any electrical device (e.g. power lines and electrical equipment). Electric fields are produced by voltage and increase in strength as the voltage increases.

Although there is weak evidence of adverse health risks, the guidelines recommend applicable management of EMF exposure which include:

Considering siting new facilities so as to avoid or minimize exposure to the public.
 Installation of transmission lines or other high voltage equipment above or adjacent

- to residential properties or other locations intended for highly frequent human occupancy, (e.g. schools or offices), should be avoided,
- Evaluating potential exposure to the public against the reference levels developed by the International Commission on Non-Ionizing Radiation Protection,
- O If EMF levels are confirmed or expected to be above the recommended exposure limits, application of engineering techniques should be considered to reduce the EMF produced by power lines, substations, or transformers. Examples of these techniques include: Shielding with specific metal alloys, burying transmission lines, increasing height of transmission towers, Modifications to size, spacing, and configuration of conductors.

Hazardous Materials: Hazardous materials in this sector include insulating oils / gases and sulfur hexafluoride, and fuels, in addition to chemicals or products for wood preservation for poles and associated wood construction material. The use of the above is provided in the guidelines summarized below:

- Equipment and transformers containing Polychlorinated Biphenyls (PCB) shall be avoided due to its toxicity to the environment,
- Poles should be pretreated at an appropriate facility to ensure chemical fixation and prevent leaching, and to impede the formation of surface residues at the right-of-way,
- The use of pesticide should be avoided and opt for alternatives to pesticide application such as: use mechanical weed control and / or thermal weeding; support and use beneficial organisms, such as insects, birds, mites, and microbial agents, to perform biological control of pests;

Occupational Health and Safety: as per the guidelines, most occupational health and safety issues during the construction, operation, maintenance, and decommissioning of electric power distribution projects are: exposure to physical hazards from use of heavy equipment and cranes; trip and fall hazards; exposure to dust and noise; falling objects; work in confined spaces; exposure to hazardous materials; and exposure to electrical hazards from the use of tools and machinery.

CEC shall introduce preventive and protective measures according to the following order of priority:

- Eliminating the hazard by removing the activity from the work process. Examples include substitution with less hazardous chemicals, using different manufacturing processes.
- Controlling the hazard at its source through use of engineering controls. Examples
  include local exhaust ventilation, isolation rooms, machine guarding, acoustic
  insulating.
- Minimizing the hazard through design of safe work systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration.
- Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE. The application of prevention and control measures to occupational hazards should be based on comprehensive job safety or job hazard analyses. The results of these analyses should be prioritized as part of an action plan based on the likelihood and severity of the consequence of exposure to the identified hazards

## 5.5. Health and Safety Policy

At CEC we are committed to managing the impact of our business activities on the Health and Safety of our Workers, Contractors, Visitors and the local community. In fulfilling this responsibility, we have a duty of care to provide so far as practicable, a working environment that is safe and without risks to health, through processes that:

- Identify, analyze, evaluate or manage risks that could cause an incident, injury or illness to people, property damage or unacceptable impacts on the workers or the neighboring community.
- Assist workers, contractors and visitors to meet their HS obligations
- Provide compliance with relevant HS legislation and conditions of licenses under which we operate.

 Consider both long term and short term health, safety and community impacts when making decisions.

## **CEC Management is committed to:**

- Providing leadership and encourage people in an active way to take responsibility and be accountable for their own safety and that of others.
- Undertaking Risk Management activities to manage risks to people in the working environment, including review of work methods and practices
- Compliance with all relevant legislation standards, and other requirements to which CEC subscribes.
- o Providing Health and Safety training to all workers
- Providing information, resources and supervision enabling workers to undertake their work in a healthy and safe manner
- Consultation with all workers and contractors to enhance the effectiveness of the
   HS system
- Ensuring that plant, equipment and substances are safe and without risk to health
   when used in accordance with standard operating procedures
- Providing, monitoring and maintaining systems for safe use, handling, storage and transportation of plant, equipment and substances.
- Workers and Contractors are required to:
- Carry out work safely and without harm to themselves, others, property and in accordance with their training, operating procedures and work instructions.
- Stop or not start activities that they believe carry an unacceptable level of risk to themselves and others.
- Comply with CEC Safety Management Plan, HS Policies, HS Procedures and programs as appropriate.
- o Undertake risk assessments of tasks prior to commencing the work.
- Actively participate in the reporting of incidents including Personal Injury, Property
   Damage and Near Misses.
- Report any hazards observed in the workplace or deficiencies with work procedures in a timely manner.
- Report any unsafe and unhealthy issues/concerns that come to their attention.

- o Ensure appropriate fitness for work and able to perform the task at hand.
- Ensure all personnel performing works are adequately trained and competent to perform such works.

#### **5.6. Additional Policies**

## Alcohol and Other drugs policy

In accordance with CEC Alcohol and Other drugs policy, all its employees executing works during the project shall not be under influence of alcohol or any controlled substances. This policy shows our commitment to health and safety in this workplace, and reducing the risks to the health and safety of all workers, contractors and visitors our commitment to complying with the health and safety requirements and rules, especially those for drugs and alcohol how we will deal with drugs and alcohol use and/or their effects in the workplace.

This policy applies to everyone at the Project sites

#### **Effect**

Drug and alcohol use can affect a person's ability to work safely. It creates a risk to workers and work health and safety.

## Responsibilities

No one must drink alcohol or use drugs at this workplace, except: for legitimate medical reasons: You must notify your supervisor if prescribed medication is likely to affect your behavior and therefore work health and safety. Your supervisor may assign you other duties while you're taking the medication at workplace-based social events. The manager/supervisor at this workplace must, if they have reasonable grounds for believing that you are incapable of safely per forming your duties or may be a risk to others due to the effects of drugs or alcohol, arrange for you to be removed safely from the workplace.

Each person must ensure that they are not, by the consumption of drugs or alcohol, in such a condition as to endanger their own safety or that of others at this workplace. This includes not coming to work if, after drinking or using drugs in your social time, your ability to work safely is still impaired. If you come to work, you must report t to your supervisor, who may assign you other duties or arrange for you to be removed safely from the workplace.

## Managing drugs and alcohol

CEC will identify all workplace factors that may influence someone to turn to drugs or alcohol, and use the hazard management process to eliminate drug or alcohol use or control the risks from them. CEC will consult with workers, work health and safety representatives and/or the work health and safety committee on this issue.

## **Disciplinary action**

If anyone is found to breach this policy, management will take disciplinary action such as giving a formal warning, followed by encouraging them to get treatment, suspension, and/or finally dismissal.

## 6. Risk Management

## 6.1. Identifying Hazards and Managing Risks

CEC will ensure systems and approaches for identifying hazards and assessing risk are in place prior to any activities commencing on site and shall utilize the Hierarchy of Controls in conjunction with:

- o The Occupational Health and Safety Requirements
- Using a risk management form to control general construction risks where necessary
- Carrying out regular site inspection and audits with a focus on a changing work environment.

CEC will also identify risks (as appropriate):

- o Before introducing any new equipment
- When introducing a new task
- When new information is received about tasks, procedures, equipment or chemicals.

All hazards that are identified throughout the project will be reported immediately assessed and controlled to levels as reasonable practicable and in accordance with CEC procedure. CEC will inform workers and subcontractors of its risk management procedures and require they are trained in risk management (Induction and Training).

## **6.2.** Hierarchy of Control

CEC where reasonably practical, will manage all risks identified by applying the Hierarchy of Controls as follows: the hazard is physically eliminated preferably from the sources, if it is not possible to eliminate, the hazard is replaced and an alternative if provided. An engineering control is then used to isolate the hazard where applicable and through administrative options, the working methods and techniques are changed and workers are provided with proper Personal Protective Equipment (PPEs) and compliance is enforced by Health and Safety Officer.

Where practical, the Principal Contractor and the contractors (as appropriate) will implement risk controls that are high in the order of hierarchy and will implement multiple controls where necessary.

#### Hierarchy of Controls Elimination the hazard Substitution Replace the hazard Engineering Isolate people from the hazard Controls Administrative Change the way Controls PPE Protect the worker with Personal Protective Equipment

# 6.3. Take 5 Safety Process

A take 5 safety checklist (Annex 2)

is a tool used to identify health and safety hazards before starting work in a site. Performing health and safety checks using the take 5 procedure and helps workers and contractors mitigate exposure to hazards and health risks.

CEC will provide Take 5 forms to all staff for performing a final safety check before commencing work. This is to ensure that all work activities are given a final check to identify and control any potential hazards that may have not already been addressed prior to commencing activities. It is designed to complement the risk Assessment process. It does not act as a replacement for formal risk assessment.

Take 5 process consists of the following 5 steps

STEP 1	Stop, step back,	Observe the work area and surrounding location for
	observe	hazards
STEP 2	Think through the task	Consider the sequence of steps involved in carrying out
		the task from start to finish
STEP 3	Identify any hazards	Identify the hazards associated with the task including
		any present in the immediate and surrounding work
		area, and hazards generated by the task
STEP 4	Control the hazards	If the hazard is not controlled and the work area not
		safe- do not start work, report to your Team Leader/Unit
		Controller/Line Manager to review the risk assessment
STEP 5	Complete the task	Once all control measures have been implemented-
	safely	commence the task

#### 6.4. Procedures and Safe Work Guidelines

These are an integral part of Risk Management process as it outlines the hazards, risks and associated control measures to be applied to ensure the task/activity is conducted in a way to reduce the risk of injury. They are documented and provide standard and useful information on a large range of on - site activities. Information within these documents should be used in conjunction with the Project procedures.

# 6.5. CEC Cease Work Authority

All the personnel will be empowered and supported by management with the right, responsibility and authority to cease or stop work when observing an unsafe condition or act that could result in harm to staff. It involves a stop, notify, correct and resume approach for resolving the situation or condition. Once such a situation arises the personnel shall immediately notify the Project Leader and EDCL representative to advise the reason for ceasing or stopping work.

CEC Project Leader will work with EDCL to resolve issues by taking appropriate measures to assess the risk eliminate or control the hazard and to record the hazard in line with the appropriate reporting procedures.

# 7. High Risk Construction Work

# 7.1. High Risk Work

CEC Project Team has identified activities for this project and will develop risk classifications for each of the High Risk Construction Work activities. Additional SWMS's and JHSA's will also be formulated for any additional high risk work that will be introduced or identified as the project progresses.

S/N	HIGH RISK at CONSTRUCTION	PROJECT SPECIFIC	MITIGATION
	WORK	EXAMPLES	MEASURE
1	Work that involves a risk of a person	Cables fixing and	Safety harnesses
	falling more than 2m	stringing of conductors	provided to all
		and transformer	workers working
		installation.	at height
2	Work that involves the demolition	Corridor clearance or	Provide proper
	of an element of a structure that is	changing conductors and	PPEs to all workers
	load bearing or otherwise related to	poles for some reasons.	and appropriate
	the physical integrity of the		tools
	structure.		
3	Work that involves structural	Construction of a line	Provide safety
	alterations or repairs that require	bay and its associated	harnesses
	temporary support to prevent	accessories	Check the stability
	collapse		of scaffolds and
			ladders
4	Work that is carried out in or near a	Excavation for poles,	Minimize the
	confined space	Cable installation	number of
			workers in the
			confined space
			Provide warning
			signs
5	Work carried out in or near trench	Excavation for poles or	Provide waning
	with excavated depth greater than	installation of	tapes

	1.5m	transformers	Provide proper
			PPEs
6	Work that is carried out or near	Excavations, installation	Provide Proper
	energized or charged electrical	of transformers, erection	PPEs
	equipment or services	of poles	Warning posts
			Fire extinguishers
7	Work that is carried out in or	Digging holes for poles,	Install traffic signs
	adjacent to a road	conductor stringing.	Hire a flag person
8	Work that is carried out in an area	Transportation of	Install traffic signs
	at a workplace in which there is any	materials in and around	Hire a flag person
	movement of powered mobile plant	the site, loading and off-	
		loading material	

Prior to starting work on the project, CEC will provide completed health and safety documents and will be filed in the project folder, which forms part of and supports this HS Management Plan. These documents will be retained for the duration of the project and archived as required as the national laws.

CEC will review the documents and the HSMP where:

- There is a need to change the method of carrying out of the high risk construction work
- A risk has been identified that is not included and managed within the HS
   Management Plan

# 7.2. Work in vicinity or on High Voltage Equipment

Procedure isolation for making equipment "dead" and safe to work

- Switch off
- Isolate
- Lock off point of isolation
- o Apply caution notice at point of Isolation
- Test for absence of voltage using a test instrument
- Test the instrument is in good working condition
- Apply circuit main earths

- o Apply temporal at point of work
- Issue a Permit to Work

#### 7.3. Hazardous Material Substances

CEC has undertaken a Hazardous Material Assessment to assess all areas of the project sites and identify the material at site and those to be brought as the project progresses with recommended best practice to remove or contain.

# 7.4. Confined Space Work

There are locations on the project site that will be deemed a confined space meaning an enclosed or partially enclosed space that:

- I. Is not designed or intended primarily to be occupied by a person; and
- II. Is, or is designed or intended to be, at normal atmospheric pressure while any person is in the space; and
- III. Is or is likely to be a risk to health and safety from
- IV. An atmosphere that does not have a safe oxygen level; or
- V. Contaminants, including airborne gases, vapors and dusts, that may cause injury from fire or explosion; or
- VI. Harmful concentrations of any air borne contaminants; or
- VII. Engulfment

A risk assessment shall be performed and that confined space control measures will be put in place prior to any confined space permit being issued. This includes but is not limited to air quality monitoring, access, first aid and rescue requirements, proper sign posting, personnel entry recording and monitoring.

The confined space procedure shall be reviewed and accepted prior to any such work being undertaken. The Project Team representative shall be notified at the time any confined space is about to be entered as well as the completion of the work.

from the above statements, it is better to include PTW

# 8. Emergency and Incident Response

# 8.1. Emergency Preparedness

In relation to emergency preparedness and response in case of emergency or incident CEC Ltd will:

- Train and test all workers regarding emergency plan (including emergency muster points) as part of their induction (this is included in the induction presentation)
- o Display emergency procedures in the site office or other visible location
- Check and mark fire extinguishers as service able at the beginning of each project and maintain three-monthly inspections thereafter.
- Train and test personnel on site in relation to the correct use of firefighting equipment
- Ensure that first aid trained personnel are identified and that first aid facilities are available
- Ensure that hazardous materials are removed where possible or identified and controls in place prior to works taking place.

**Emergency Procedure:** In the event of a fire or similar emergency evacuation, CEC Emergency Plan requires hat on-site personnel:

- o Stop work immediately and the work place be vacated if in imminent danger
- Assist anyone in the work place that may not be familiar with the evacuation procedures
- Call emergency services on 999 from a mobile phone. Other emergency numbers are on display in the site office.
- Notify EDCL as soon as reasonably practical
- Assemble in the nominated assembly points until you receive further instructions from the principal contractor or emergency services personnel.
- Notify Project site security as soon as practicable and give details of the event and location that an emergency has taken place.

#### **Emergency Muster Point**

The Project site emergency muster point will be on the area outside the main gate for the campsite and store. Dependent on the project activity location and due to the vast size of the

site, additional muster points may be allocated or established on differing locations.

## **Emergency Contact List for Site**

CEC will maintain emergency contact details for all workers onsite. If an incident occurs at the work place the procedure is:

- o Immediately notify EDCL Project Leader and safeguards.
- o Not interfere with the scene of the incident
- Depending on the nature and severity of the injury, CEC will notify the Police and local authorities.

CEC will record details of the incident and will ensure any remedial action is taken.

	EMERGENCY NUMBERS				
1.	Fire Brigade	111			
2.	Police/ Emergency	112			
3.	Ambulance	912			
4.	Traffic Accident	113			
5.	Maritime Security	110			
6.	COVID 19	114			
7.	Project Engineer	0785838006			
8.	EHS Expert	0788507656			

At each site, an emergency assembly point shall be defined and shall be selected to be appropriate and accessible to all workers in case of emergency or hazard spread. A telephone number of nearest hospital or health center and the local authority at the cell level shall be displayed at a sign post for contacts in case of emergency or any complaint and grievance. The health and safety officer shall be responsible to call for emergency assembly using a whistle. Given the size and complexity of the project, the contacts for health posts, health centers and hospitals are found on the link provided by the Ministry of Health (https://moh.gov.rw/index.php?id=547).

#### 8.2. Notifiable Incidents

CEC Management will report the following incidents to the client:

- A fatality
- o An incident requiring hospitalization
- Major injuries
- Near miss

#### In the event of such an occurrence:

- Notify the EDCL Project Manager immediately,
- Report the incident with a root cause analysis of the incident within 48hours,
- o Do not disturb the site until given clearance by /EDCL Project Manager,
- /EDCL will confirm the reporting requirements by the local authorities and the National Police,
- /EDCL shall only give permission to disturb the site when notified by the Police after investigation if a formal investigation is not required,
- o If a formal investigation is required, /EDCL will secure the site,
- EDCL and CEC will ensure that corrective actions are completed adequately.

#### 8.3. First Aid

Depending on the location of works, the requirement of a first aid provision will alter. CEC shall provide first aid kits where staff is required to work in remote stations. First aid kits will be located in company owned vehicles or other locations as determined by the project site. Snake bite kits will also be carried when working in remote locations or on green field sites

- If anyone becomes aware that an item of first aid is out of stock or out of date, they
  are to notify the Project Team Leader immediately.
- o First aid should be administered by trained first aid personnel.

CEC shall ensure that their work force consists of qualified First Aid personnel and supply adequate First Aid equipment whose content is provided in annex 3.

In the event of a person being injured, trained first aid personnel should:

- o Stabilize the person and administer first aid
- Phone an ambulance (depending on the extent of the injuries)

- Notify CEC and/or /EDCL if emergency services are called. In all other circumstances notify /EDCL as soon as practicable.
- Notify site supervisor as soon as practicable and give detail of location where help is required.

# 9. Site Insurance

### **Scope of Cover**

The basic concept is to offer contractors' all risk (unforeseen and sudden physical loss or damage) and adequate protection against loss or damage in respect of the contractor works, construction plant and equipment and or construction machinery, as well as third party claims in respect of property damage or bodily injury arising in connection with the execution of a construction project.

- o CEC will provide insurance to cover all risk for activities at site in general.
- Each employee must have his/her personal health insurance such as MUTUELLE DE SANTE.
- Extend the terms and conditions as indicated in the contract between CEC and Insurance company

# 10. Induction and Training

#### 10.1. Worker Induction

All personnel entering the main security gate to perform works for the first time within the project site will be required to undergo a Site Induction. In the first induction week training, CEC will invite employer for participation and provide induction report.

Before the starting work at site, it will be a meeting for all workers. For new employees progressively, they will get induction session from HS officer, the experienced workers and the meeting before site work beginning.

This induction includes the following:

- The expectations outlined in this Health and Safety Management Plan, including all policies and procedures
- o The emergency musters point
- The site rules
- o The facilities
- Any site specific hazards
- o High risk construction work activities
- o Personal protective equipment required to enter the site
- First aid

## 10.2. Worker Training

CEC will undertake a training needs analysis for the project to comply with the legislative and HS regulations and will not permit workers to carry out specific work unless they:

- o Are trained and competent for the specific work to be undertaken
- Are trained to deal with any risks associated with the specific work and understand the control measures in place
- Have had relevant construction induction training
- On-site training and supervision is provided
- Undertake external training for specific tasks where required
- o Have high risk licenses for all high risk work available and a register is maintained
- o Training on first aid.

# 11. Consultation and Communication/stakeholders engagement

#### 11.1. Consultation

CEC will consult with all workers on Health and Safety issues for this project:

- o At toolbox meetings where anyone can raise issues for discussion
- Informally during the planning of activities or the development of SWMS by workers
- When changes to work place arrangements could affect the health and safety of workers
- During investigations into any incident to establish details of the incident or to formulate corrective action to prevent the incident from re-occurring.
- Formal progress and construction meetings

CEC may plan to invite a doctor or other specialist to do voluntary normal body checking for all employees in order to have general status about health for them.

#### 11.2. Communication

CEC will provide workers with this HS Management Plan before starting work on the project. Records of all communication shall be kept.

CEC will communicate relevant HS information to everyone involved in this project by:

- o Inductions
- Pre-start meetings
- Tool box meetings
- Incident reports and outcomes
- Safety signage
- Distributing safety alerts or guidance material about project specific hazards/incidents
- Site Safety Notifications Disciplinary action will be taken against persons that deliberately in fringe the requirements of this plan, the site safety rules or are in breach of other legislative requirements.

# 11.3. Disciplinary Measures

Disciplinary action will be taken against persons that deliberately infringe the requirements of this plan, the site safety and site rules or are in breach of other legislative requirements.

Disciplinary actions may include

- A verbal warning, then
- Written notification and then
- Complete removal /suspension from the project.
- For a serious breach of safety, a person or persons may be immediately dismissed and removed from site or reported to other organs like RNP, ISANGE One Stop Center or Local Government Officials.

#### 11.4. Sexual harassment

CEC will work with the local community in order to get information and solve problems related to behaviors of workers out of site; work with the existing neighboring communities of the site work; such as community policing, INCUTI Z'UMURYANGO and so on. That will help in advising the workers and change the behavior. Any sexual harassment shall not be tolerated and immediate dismissal shall be applied and the case reported to competent authorities.

## 11.5. Gender Aspects

CEC will consider gender aspect in the implementation of the project in compliance with guideline or policy provided by the country as per the national gender policy and requirements at least 30 % of the workers shall be employed and positive discrimination and selection shall be adopted during recruitment. Women Associations shall be involved to identify most needful women to be employed.

#### 11.6. COVID-19 Prevention

CEC will implement the mitigation measures to prevent COVID-19 spread and minimize the risks of contamination as per the National Guidelines and the Ministry of Health as follows:

- 1. WASH HANDS: Frequently wash hands with soap and clean water for at least 20 seconds or an alcohol-based hand sanitizer;
- 2. MASK: always wear an appropriate mask while in public;
- 3. AVOID HANDSHAKES: Greet people with a wave, bow, or nod;
- 4. SNEEZE OR COUGH: Cover mouth and nose with flexed elbow or tissue, throw tissue away and immediately wash hands;
- 5. AVOID CLOSE CONTACT: If experiencing fever, cough, sneezing avoid contact with others and stay home when sick;
- 6. CLEAN AND DISINFECT: Clean and disinfect surfaces around your home and work;

# 11.7. GBV Prevention, SEA, CAE

Awareness programmes against GBV, SEA and CAE shall be organized on regular basis and through toolbox meetings that will be carried out by the EHS Expert.

The influx of workers and followers can lead to adverse social and environmental impacts on local communities, especially if the communities are rural, remote or small. Such adverse impacts may include increased demand and competition for local social and health services, as well as for goods and services, which can lead to price hikes and crowding out of local consumers, increased volume of traffic and higher risk of accidents, increased demands on the ecosystem and natural resources, social conflicts within and between communities, increased risk of spread of communicable diseases, and increased rates of illicit behavior and crime. Such adverse impacts are usually amplified by local-level low capacity to manage and absorb the incoming labor force, and specifically when civil works are carried out in, or near, vulnerable communities and in other high-risk situations. To mitigate these impacts, local residents shall be given priorities during recruitment and non-local workers shall be sensitized on the risks and consequences of bad behaviours.

On Gender-based violence: Construction workers are predominantly younger males. Those who are away from home on the construction job are typically separated from their family and act outside their normal sphere of social control. This can lead to inappropriate and criminal behavior, such as sexual harassment of women and girls, exploitative sexual relations, and illicit sexual relations with minors from the local community. A large influx of male labor may also lead to an increase in exploitative sexual relationships and human trafficking whereby women and girls are forced into sex work. The risks and consequences of GBV shall be clearly explained during the tool box meetings and any violence shall be reported to the competent authorities.

The influx of workers and service providers into communities may increase the rate of sexual abuse and exploitation, crimes and/or a perception of insecurity by the local community. Such illicit behavior or crimes can include theft, physical and sexual assaults, substance abuse, prostitution and human trafficking. Local law enforcement may not be sufficiently equipped to deal with the temporary increase in local population.

On child labor and school dropout. Increased opportunities for the host community to work, sell goods and services to the incoming workers can lead to child labor to produce and deliver these goods and services, which in turn can lead to enhanced school dropout.

Awareness programmes against GBV, SEA and CAE shall be organized on regular basis and through toolbox meetings that will be carried out by the EHS Expert and violence or exploitation shall be reported to the competent authorities. Local NGO and Associations related to GBV prevention, Child Abuse and Exploitation and Sexual Abuse and Exploitation shall be involved during induction trainings and toolbox talks.

#### 11.8. HIV/AIDS and non-communicable diseases awareness

The influx of people may bring HIV/AIDS and communicable diseases to the project area, including sexually transmitted diseases (STDs), or the incoming workers may be exposed to diseases to which they have low resistance. This can result in an additional burden on local health resources. Workers with health concerns relating to substance abuse, mental issues or STDs may not wish to visit the project's medical facility and instead go anonymously to local medical providers, thereby placing further stress on local resources. Local health and rescue facilities may also be overwhelmed and/or ill-equipped to address the industrial accidents that can occur in a large construction site.

Awareness programmes on HIV-Aids and communicable diseases including STD shall be organized on regular basis and through toolbox meetings that will be carried out by the EHS Expert. Free testing shall be encouraged and condoms shall be provided and availed on site at well designated areas and regularly replenished. Social assistant at Cell levels and Local NGO and Associations related HIV/AIDS and communicable diseases shall be involved during induction trainings and toolbox talks.

## 11.9. Clean Drinking Water

Clean drinking water shall be provided on site and each worker shall use a personal recipient to avoid diseases spread and ensure proper hygiene. Replenishment of the drinking water containers shall be provided on regular basis.

# 11.10. Notices and Registers

Health and safety advisory, regulatory and warning notices for workers and visitors shall be provided and posted in the works areas. In addition, accident notices shall be provided in the incident report in case of injury, accident or fatality occurrence.

A register of workers and visitors entering the work areas shall be maintained every day and all supervisory and technical personnel appointed to the Construction Site. A register of the state of equipment including scaffolding where applicable shall be filled and maintained by the OHS Officer.

# 11.11. Integrated environment, health and safety management

CEC as an organization shall integrates all environmental health and safety requirements as one complete framework, enabling to work as a single unit with unified objectives related to environmental health and safety.

This integration shall be complemented by assessment and assurance, provide a structure to ensure work is performed safely and in compliance with applicable ES&H requirements, policies and laws consistent with the graded approach.

The primary focus shall be to provide the worker with a safe work environment, ensure that necessary resources are made available to perform the work, and establish requirements for adequate procedures and controls to ensure that work is performed safely while minimizing environmental health and safety impacts.

CEC shall ensure that all his employees undergo a EHS induction based on the national legislative requirements and laws before starting work onsite. It shall continuously conduct on site toolbox talks, display posters and discuss EHS requirements on site and a full time well trained EHS officer recruited.

# 12. Site Safety Procedures

#### 12.1. Site Rules

Site personnel shall carryout works on site as per the site rules specified in the "Contractor I Health and Safety Requirements" All persons working on the project sites shall take all reasonable precautions to ensure the Health and Safety of persons including:

- CEC workers and visitors.
- Other Contractors.
- o The Contractor's workers.
- Sub-Contractors.
- Third parties.

CEC shall ensure that any sub-contractors working for the project should be familiar with the Contractor HS Requirements.

CEC warrants that they are aware of and will observe the requirements specified in the HS requirements for site with respect of health and safety and the implications there of for the execution of the work under the contract. These requirements constitute:

- The legislation and Codes of Practice set out.
- o Induction requirements and information contained therein.
- CEC's regulations and policies
- Project hazard controls.
- Reasonable directions from the authorized personnel for the purpose of safety compliance.

The "Contractor Health and Safety Requirements" is issued to contractors at the tender stage or upon engagement of persons or companies on site through the site induction process.

A copy of the site rules is displayed in the site offices. The site rule topics covered in the Site Induction are general housekeeping are the followings:

- Alcohol and Other Drugs
- No Smoking Policy
- o Prohibited Items
- Personal Protective Equipment (PPE)
- o Walking on site
- Driving or walking and talking on mobile phones

- o Vehicles onsite
- Signs
- Emergencies
- First Aid
- Lockout–Tag out Isolations

#### 12.2. Site Amenities

- o Toilets and drinking water will be provided on site at nominated locations.
- o All workers are to have good hygiene standards and clean up after themselves.
- o Demountable amenities may be required if working in remote locations on site

#### 12.3. Mobile Phone use on site

- The use of personal mobile phones in a work area (non-company supplied) is restricted unless agreed arrangements have been made between management and the worker.
- Use of mobile phones is prohibited whilst travelling in a motor vehicle unless the vehicle is fitted with a hands free device.
- Personnel who are carrying mobile phones and are on foot shall cease walking, ensure they are in a safe position before answering, making a call, checking for emails or texting.

# 12.4. Site Security

CEC will, so far as reasonably practicable, secure the site by:

- Keeping the work area secure during the project
- Erecting a fence at the offices or camp site to prevent unauthorized access where
   required to do so under the HS Regulation
- Locking gates to the site outside normal hours of operation
- Workers are required to keep the site secure, for example by closing or locking gates and regular inspection and maintenance of security fencing.

#### 12.5. Site Signage

CEC will display signs on the entrance of the camp site including:

o The principal contractor's name, contact details and after-hours telephone number

- o Supervisor's name and contact number
- PPE requirements for entering the site as well as speed limits and any other
   mandatory requirement asset out signs required HS and ESMP for the project.
- All signage will be clearly visible from outside the work area where the activities are being undertaken.

# 12.6. Personnel Protective Equipment

CEC will manage the risks associated with construction work by requiring personnel to utilize the Personal Protective Equipment (PPE) provided to workers onsite.

By ensuring that the PPE is:

- o Suitable for the nature of the work and any hazard associated with the work
- A suitable size and fit ensuring it is reasonably comfortable for the worker who is to use or wear it
- Maintained, repaired or replaced so that it continues to minimize risk to the worker
   by:
  - ✓ Ensuring it is clean and hygienic
  - ✓ Ensuring it is in good working order
- Ensuring it is used or worn by the worker, so far as is reasonably practicable workers must:
  - ✓ Follow all instructions to wear and use PPE as per the manufacturer's specification
  - ✓ Take reasonable care of PPE
  - ✓ Assess the task and ensure that the correct PPE is being used

# 13. Managing Construction Hazards Specified in Regulations

# 13.1. Working at Heights

CEC will manage the risks associated with falls from heights by:

- Ensuring that where practicable, any work involving the risk of a fall is under taken on the ground or on a solid construction (such as an elevated work plat form)
- Where this is not practicable, provide a fall prevention device such as secure fencing,
   edge protection, working plat forms and/or covers
- Where this is not practicable, provide a work positioning system such as plant or a structure (other than a temporary work plat form) that enables a person to be positioned and safely supported
- Where this is not practicable, provide a fall arrest system such as a safety harness system.
- o Workers will be trained in emergency procedures for fall arrest systems
- o Apply a fall restraint where a harness and lanyard restrict personnel from a fall zone
- o Consider the fall zone and possible "pendulum effect"
- When undertaking work involving the risk of a fall from height, workers must:
- Follow all instructions
- Work with a buddy when using a ladder
- Only use approved work platforms
- Assess climate (wind, rain, dust, sufficient light etc.)
- Assess the surface that requires access, (corrosion, stability, gradient, slip possibility/grip etc.)
- Assess that the equipment being used is suitable for the task and fit for use. Inspection tags on harnesses and any fall prevention equipment to be current
- o Check that a suitable anchor point is available and can withstand the force of a fall.
- Static lines are to be rated, inspected and in good condition.
- o Have a rescue plan

## 13.2. Falling Objects

Where practical, CEC will manage risks associated with falling objects. This will in clued requiring using control measures such as barriers, toe-boards and by storing and stacking materials safely.

Where this is not possible, a risk assessment must be undertaken and appropriate control measures implemented to manage the risk of injuries from falling objects.

# 13.3. Excavation Work and Trenching

No excavation work will be permitted to start unless they have:

- Obtained an excavation permit
- o A pedestrian bridge and pathways are provided
- Investigated any underground services that may be affected by their works, before starting work
- Implemented control measures to avoid director in advertent contact with underground services pot-hole dug (by hand) to expose existing services before any mechanical excavation near the services
- Consider ground stability

Once excavation and related works are completed, the backfilling shall be carried and plant trees and grasses where applicable.

# 13.4. Working near Overhead or Underground Essential Services

CEC will manage the risks associated with working in the vicinity of an overhead or underground power line.

If maintaining a safe distance is not reasonably practical, it will be required to:

- Assess the risk associated with the proposed work
- o Implement control measures consistent with the risk assessment
- o Contact and consult with the local essential services provider.

For excavation work near underground essential service CEC will:

- Take all reasonable steps to obtain current underground essential services information before directing or allowing the excavation work to start
- o Provide this information to any person engaged to carry out the excavation work
- Consider this information when carrying out, directing, or allowing the carrying out
   of the excavation work
- Ensure this information is available for inspection.

CEC will comply with the following rules:

# a) For work near overhead power lines up to and including110kV:

- Work is not permitted within 4meters of overhead power lines
- The Person in charge of the work must have written authority, permit to work from EDCL to work within the "no-go" (exclusion)zone
- A safety watcher shall be used if using plan to equipment in the vicinity of overhead power lines.

#### b) For work near overhead power lines of greater than 110 kV:

- Work is not permitted within 8meters of overhead power lines
- The person in charge of the work must have written authority- Permit to Work from
   EDCL to work within the "no-go" (exclusion) zone
- Safety watcher shall be used if using plant or equipment in the vicinity of HV overhead power lines.

#### 13.5. Electrical

Power supplied to the site must only come from:

- An electricity distributer main
- An existing witch board permanently installed at the premises
- A compliant low voltage generator
- o A compliant inverter. (to be approved by The Principal Contract or management)

Switchboards and distribution boards used onsite must:

- Be of robust construction and materials capable of withstanding damage from the weather and other environmental and site influences
- Be securely attached to a post, pole, wall or other structure unless it is of a stable
   free standing design able to withstand external forces likely to be present.
- Incorporate suitable support and protection for flexible cords and cables and prevent mechanical strain to the cable connections inside the board
- Protect all live parts at all times
- Be individually distinguished by numbers, letters or a combination of both (where multiple boards are present).
- Flexible cords used on construction sites must be rated heavy duty.
- To avoid confusion with individual earthing conductors, green sheathed flexible

power cords must not be used on site.

- Flexible cords must be either protected by a suitable enclosure or barrier (flexible or rigid conduit) or located where they are not subjected to mechanical damage, damage by liquids or high temperature (e.g. Leads must be elevated on stands or hung from non-conductive support brackets).
- The Principal Contractor and its contractors will main Tainan in-service inspection and test regime for all portable electrical leads, tools and earth leakage devices.
- The Principal Contractor will verify that after the equipment has been inspected and tested, it will be fitted with a durable, non-reusable, non-metallic tag. The tag will include the name of the person or company who performed the test and the test and re-test date.
- Records of all inspections, tests, repairs and faults related to all electrical equipment will be recorded in a "testing and tagging" register.
- Electrical equipment used in hostile environments should be inspected more frequently
- Workers must report any damaged electrical equipment to the principal contractor.
   It will be removed from service and either repaired or replaced and subsequently inspected and tested as required.
- New electrical equipment must be recorded in the register and subjected to the inservice testing regime within the first 3months of service.

# 13.6. Plant and Equipment

CEC will manage the risks associated with working on the project including in relation to all plant and equipment used on site. Such plant and equipment must comply with the requirements of the HS Regulations and codes of practices.

#### The requirements are that:

- o Plant and equipment is used only for the purpose for which it was designed
- All health and safety features and warning devices on plant are used
- o All information, training and instruction provided must be followed
- Guarding must be permanently fixed and is not permitted to be removed
- No person other than the operator may ride on the plant unless the person is provided with a level of protection that is equivalent to that provided to the

operator

- Maintenance/servicing and testing is carried out and logged
- o Check equipment is "fit for use "each shift

#### Further requirements are that:

#### <u>Statutory requirement:</u>

- All plant is regularly maintained, inspected and tested by a relevant competent person
- All plant that lifts or suspends loads is specifically designed to lift or suspend that load.

#### **Preventive requirement:**

 The plant has a warning device that will warn persons who may be at risk from the movement of the plant

#### *Pre-use requirement:*

- All safeguards are in place and operational. (E.g. Fire extinguishers, flashing lights, etc.);
- o The plant operator is ticketed or holds competencies in the use of the equipment
- Site vehicles and trucks are well maintained, road worthy and that personnel are licensed to operate.

#### 13.7. Scaffolds

CEC will manage the risks associated with working on the project including scaffolding by ensuring that:

- The scaffold is erected by a competent person (having regard for high risk competency ticket for structure above 4meters)
- Before the use of a scaffold, the competent person has advised (in writing) that the structure is safe. A "scaff-tag" will be required to be filled out and attached to the structure.
- Scaffolding is inspected by a competent person:
- Before use of the scaffold is resumed after an incident occurs that may reasonably be expected to affect the stability of the scaffold
- Before use of the scaffold is resumed after repairs
- o If an inspection indicates that any scaffold or its supporting structure creates a risk

to health or safety

- o Any necessary repairs, alterations and additions will be made or carried out
- The scaffold and its supporting structure will be inspected again by a competent person before use of the scaffold is resumed.
- There is noun authorized access to the scaffolding including by removing ladders where there is no site fencing and barricade and danger flag the access point to the scaffold.

#### Workers must:

- Not use incomplete scaffolding
- o Report any scaffolding issues to the principal contractor
- $\circ\quad$  Comply with the directions of any tags attached to the scaffold
- o Report any damage or incorrect fixed components on the structure

# 14. Managing other Construction Hazards

# 14.1. Ladder Safety

CEC will manage hazards associated with ladders by ensuring that:

- Ladders are used according to the manufacturer's instructions
- Only one person at a time using a ladder
- Work is performed from a platform ladder opposed to a step ladder
- o Ladders on scaffolds or elevated work platforms are not used to gain extra height
- Ladders are fit for purpose e.g. Fiberglass ladders shall be used where there is a risk
   of live rails adjacent or overhead wires, where isolation is not possible.
- o Risk assessment of the task with the view of maintaining three points of contact
- o An alternative access appliance is used where repetitive work is required at height

# 14.2. Manual Handling

CEC and its engaged contractors will manage hazards associated with manual handling. The requirements are that:

- All users follow good manual handling practices
- o Risk assessment of loads or tasks occurs
- Mechanical lifting aids are used where applicable
- Appropriate PPE is provided to workers

## 14.3. Slips, trips and fall

CEC will manage hazards associated with slips, trips and falls by ensuring that:

- Slips, trips and falls check list are used as required
- Visual checks are conducted for hazards that could cause someone to slip, trip or fall
- Workers keep the site tidy as part of the written site rules
- Regular audits on work areas are conducted pre-start meetings cover the importance of housekeeping and engagement of personnel to be proactive in the rectification of any hazards identified in work areas
- Protecting openings or voids created or discovered during works, eliminating the chance of fall injury.

# 14.4. Hand Operated and Power Tool Use

CEC will manage hazards of hand operated and power tools. The management will require that:

- o Tools are regularly checked to ensure they are in a safe working order
- o All electrical tools are recorded in a test and tag register
- Electrical tools are tested and tagged regularly
- Any issues identified with power tools are communicated to workers through a tool box meeting.

Before using power tools, workers must ensure:

- o Electrical connections are secure
- Electricity supply is through a residual current device
- Safety guards are in position
- The machine is switched off before activating the electricity supply
- Appropriate PPE is used as required by manufacturer's guide lines or as guided by the principal contractor
- The tool is being used for the purpose for which it is designed
- The operator is competent in its use
- The tool is not restricted on site (e.g.: grinders or explosive power tools)

Workers must report any issues with power tools to CEC. Unsafe tools will be tagged out of service and removed from the work area

#### 14.5. Site Traffic Movements and Mobile Plant

CEC will manage risks associated with traffic management in relation to the project. The management requires that:

- All vehicles on site are to be road worthy
- o Drivers and operators to be licensed for the vehicle or machine being operated
- Speed limits are sign posted across the site and adhered to
- Alternate traffic routes to perform project activities will be set out on a Traffic
   Management Plan, informing all relevant personnel on site inclusive of security.
- Sign posting of traffic directions, stop and give way etc.
- Delineation, safety Krebs, beams and barriers as required
- o All vehicles should have valid vehicle inspection certificate and insurance

# 15. Audits and Inspections

The goal of undertaking Audits and Inspections on the Project is to recognize positive behaviors and work practices, identifying areas in need of improvement and assessing how tasks are being undertaken as well as the environment in which they are being performed. Internal inspections shall be regularly carried out during construction by the project manager.

The interactive presence with site personnel and the information captured helps assist with creating a safe working culture.

After the project completion, an external audit is required after every 2 years to ensure mitigation and controls measures are enforced during project operation.

# 15.1. Walk, Observe and Communicate (WOC)

A WOC is a structured program of work place observations to initiate discussions based on specific or general issues.

The purpose of WOC is to:

- o Coach, motivate and facilitate positive behaviors and approaches to work.
- Identify and correct issues and hazards in the work area including unsafe acts and conditions.
- Prevent injury, damage and lost production by developing a culture of commitment to resolving their underlying causes in the workplace.
- Reinforce and raise standards 'the standard we achieve is the standard we walk past'.
- Eliminate injuries, damage and waste.

WOC sessions are not policing exercises. Their success is based on open and honest discussion of the issues. The focus must be on identifying causes not attributing blame.

Where continued non-compliance is observed disciplinary action must be implemented in accordance with Site policy, but separate from the WOC process.

Management shall undertake WOC's on their work are as to ensure the above mentioned purposes are conducted.

Completed WOC's shall be forwarded to the HS Manager for review and record management.

## 15.2. Weekly Safety Inspections

In order to ensure the safety and welfare of personnel on site, Weekly Safety Inspections shall

be undertaken and documented by area Supervisors. The inspections shall be carried out to identify:

- o Potential hazards in the work area
- Unexpected risks due to working in proximity with other services/businesses/ activities
- o Deficiencies with plant or equipment
- o Areas of improvement in the working environment or process implementation

All actions raised during the inspection shall be documented and tracked in the Corrective Action Plan until completion.

# 15.3. Targeted Inspections

In addition to the Weekly Safety Inspections, specific Targeted Inspections shall be undertaken on the Project. Targeted Inspections include the following:

- Office and Amenities
- First Aid and Facilities
- Housekeeping, Access and Egress
- Fall Prevention
- Lifting Equipment
- Cranes
- Scaffolding
- o Electrical Equipment
- Mobile Plant
- Employee Conduct
- o Permit to Work
- Hazardous Substances
- Welding/Hot Work
- Excavations
- Confined Space Entry
- Electrical Isolations
- Driving Safety
- Earth moving Activities

All actions raised during the inspection shall be documented and tracked until completion.

# 17. Issue Resolution

Issue management is the process of identifying and resolving issues. Problems with staff, or suppliers, technical failures, material shortages- these all might have a negative impact on the project. If the issues go unresolved, the project risks creating unnecessary conflicts delays or even failure to produce the deliverables.

The timeframe for resolution and the resources allocated to resolve a Health and/or Safety issue will be proportionate to the likelihood and seriousness of the potential consequences of the HS hazard/risk associated with the issue.

Personnel who identify a Health and/ or Safety issue must report it immediately to their immediate supervisor and the supervisor and workers must work together, in conjunction with other people affected by the issue, to identify a solution.

#### **Grievance Redress Process**

Process	Description	Time frame	Other information
Identification of grievance	✓ Face to face; phone; letter received by the GRC at sector level.	1 Day	Phone number of one of the GRC member
Grievance assessed and logged	✓ Significance assessed and grievance recorded or logged (i.e. in a log book)	Same Day 1	<ul> <li>✓ Significance criteria:         Level 1 –one off event;</li> <li>✓ Level 2 – complaint is         widespread or repeated;</li> <li>✓ Level 3- any complaint (one off         or repeated) that indicates         breach of law or policy or this         EHS provisions or any other         official document</li> </ul>
Grievance is acknowledged	✓ Acknowledgement of grievance through appropriate medium	1 Day	
Development of response	<ul> <li>✓ Grievance assigned to the GRC for resolution</li> <li>✓ Response development with input from GRC members</li> </ul>	2 – 3 Days	
Response signed off	✓ Redress action approved by the GRC	1 Day	Any member of the GRC to sign off
Implementation and	✓ Redress action implemented and update of progress on resolution	1 -2 Days	

Process	Description	Time frame	Other information
communication of response	communicated to complainant		
Complaints Response	<ul> <li>✓ Redress action recorded in grievance log book</li> <li>✓ Confirm with complainant that grievance can be closed or determine what follow up is necessary</li> </ul>	1 Day	
Close grievance	<ul> <li>✓ Record final sign off of grievance</li> <li>✓ If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third-party arbitration or resort to court of law.</li> </ul>	1 Day	Final sign off on by the GRC at Cell level

# 18. Condom provision

As one of the responsibilities of the contractor's OHS Officer, condoms shall be provided on site and placed at a well designated place accessible by all workers including toilets. On a weekly basis, the OHS officer will check and ensure that condoms are available all the time.

# 19. Filling and management of HS documents

CEC plans to file and manage all documents related to HS during the period of project implementation by safe and appropriate manner and include by not limited to REG Occupational Health and Safety Policy, IFC Guidelines on Health and Safety for construction of transmission and distribution lines and the ESIA for productive uses by /EDCL.

# 20. Monitoring and evaluation of environmental health and safety plan.

Impacts	Proposed mitigation/remarks	Indicator	Frequency	Responsible
Risks of fall for workers working at height	Safety harnesses provided to all	Safety harnesses	Daily	Site engineer
during cables fixing and stringing of	workers working at height	provided to workers		Foreman
conductors				EHS Officer
Risk injuries for work that involve load	Provide proper PPEs to all workers	PPEs and appropriate	Daily	Site engineer
bearing materials and equipment	and appropriate tools	tools provided		Foreman
				EHS Officer
Risk of fall for works which require	Provide safety harnesses	Provide safety	Daily	Site engineer
temporary support	Check the stability of scaffolds	harnesses and		Foreman
	and ladders	scaffolds and ladders		EHS Officer
		checked and labelled		
Impacts related to working in confined	Minimize the number of workers	Warning signs	Daily	Site engineer
spaces like poor ventilation and risks of	in the confined space	provided		Foreman
injuries	Provide warning signs	Number of workers		EHS Officer
Risks of fall in excavated trenches deeper	Provide warning tapes	Presences of warning	Daily	Site engineer
than 1.5 meters	Provide proper PPEs	tapes and signs		Foreman
		PPEs provided		EHS Officer

Impacts	Proposed mitigation/remarks	Indicator	Frequency	Responsible
Risks of electrocution near energized or	Provide Proper PPEs	PPEs provided	Daily	Site engineer
charged electrical equipment or services	Warning posts	Presence of warning		Foreman
	Fire extinguishers	tapes and fire		EHS Officer
		extinguishers		
Risks of accidents while in areas adjacent	Install traffic signs	Presence of traffic	Daily	Site engineer
to road	Hire a flag person	signs and flag person		Foreman
				EHS Officer
Risks of injuries and accidents while	Install traffic signs	Presence of traffic	Daily	Site engineer
working in areas where there is movement	Hire a flag person	signs and flag person		Foreman
of powered mobile plant				EHS Officer
Storage of materials including hazardous	The contractor to ensure the	Separate storage with	Weekly	Site engineer
materials	storage of materials are located in	impervious floor		Foreman
	the designated stores and			EHS Officer
	separated from other non-			
	hazardous materials. Where			
	necessary, provide impervious			
	floors.			

Impacts	Proposed mitigation/remarks	Indicator	Frequency	Responsible
Storage materials are exposed and	The storage area is well	Storage demarcated	Weekly	Site engineer
accessible by unauthorized people and	designated, demarcated and	and fenced		Foreman
workers	fenced.			EHS Officer
	The access of unauthorized			
	people should be controlled and			
	warning sign installed.			
Excess noise creating nuisance to workers	Provide appropriate PPE to	PPEs provided	Weekly	Site engineer
and neighboring communities	Workers	Schedule of noisy		Foreman
	Schedule noisy activities to	activities		EHS Officer
	between 7.00 and 6.00pm when			
	people are busy working			
Dust pollution due to excavation works	Watering of dust generating	No dust on site	Weekly	Site engineer
and materials transport	activities	Hauled trucks		Foreman
	Hauling all trucks transporting			EHS Officer
	materials			

Impacts	Proposed mitigation/remarks	Indicator	Frequency	Responsible
Exhaust fumes pollution from trucks and	Equipment and trucks are	Equipment and trucks	Monthly	Site engineer
other equipment	properly maintained	maintenance record		Foreman
	All trucks and vehicles should	Valid Vehicle		EHS Officer
	have valid Vehicle Inspection	Inspection Certificate		All drivers
	Certificate			
GBV, SAE and CAE in the project sites and	Awareness programmes and	Awareness and tool	Monthly	Site engineer
areas	toolbox meetings to sensitize the	box meetings		Foreman
	workers on the consequences of	minutes		EHS Officer
	the violence and abuses			
Impacts on human health due to	Provision of condoms in	Presence of condoms	Monthly	Site engineer
HIV/AIDS, STD and communicable	convenient and visible places such	and distribution		Foreman
diseases	as toilets and storage.	points		EHS Officer
	Awareness on, HIV Aids and STD	Awareness and		
	prevention through tool box	meeting reports and		
	meetings on a regular basis	minutes		

Impacts	Proposed mitigation/remarks	Indicator	Frequency	Responsible
Impacts on human health due to COVID 17	Awareness on COVID 19,	Awareness	Daily	Site engineer
transmission to workers and neighboring	prevention through tool box	programme report		Foreman
communities	meetings on a regular basis. And			EHS Officer
	enforcement of the following:			
	✓ Regular wash of hands			
	using hand sanitizer or			
	alcoholic mix;			
	✓ Avoid shaking hands;			
	✓ Observe social distancing			
	of at least 1 meter;			
	✓ Always wear a clean and			
	appropriate mask.			

### 21. Conclusion and recommendations

#### 21.1 Conclusion

The EHSMP identified and highlighted a number of issues pertaining to the proposed medium voltage lines construction for productive uses. The risks and impacts have been assessed and described in some detail to gain an adequate understanding of possible environmental health and safety effects of the proposed project during construction and mitigation measures in response to negative aspects have been proposed.

The Monitoring and Evaluation Management Plan provides way forward for in relation to risks and negative impacts mitigation, monitoring indicators, frequency of monitoring and responsible for monitoring.

The consultant is recommending that the Contractor assign an environmental health and safety officer to undertake the monitoring of the mitigation measures for the project implementation in the selected districts.

Given the nature and location of the project, the conclusion is that the environmental health and safety risks and potential impacts associated with the proposed project are of a nature and extent that can be reduced, limited and eliminated by the application of the proposed control measures in this EHSMP with some recommendations.

#### 21.2. Recommendations

It is recommended based on the EHSMP for the construction of the low and medium voltage lines for productive uses in the selected districts and supplementary information that the contractor is responsible but not limited to the following:

- The contractor shall comply with this EHSMP, the ESIA of the project and any other documents and requirements in compliance with national and international environmental health and safety laws and policies,
- 2. Proper Personal Protective Equipment (PPE) are provided to all workers and visitors at the site;
- Training, awareness, tool box meetings and awareness campaigns on Covid 19, HIV/AIDS and STD and communicable diseases prevention, GBV, environmental health and safety management are organized,
- 4. Excavated soils should be used for backfilling or else transported to designated dump

- sites while trucks are covered,
- 5. To avoid dust pollution, excavations should be done after watering the areas and dust masks provided to implicated workers;
- 6. Noisy activities shall be carried out during working hours when people are at work;
- 7. Refuse bins to be installed at strategic positions to avoid accumulation of wastes a housekeeping team shall be appointed to regularly monitor the waste management
- 8. First Aids Kits should be provided on site and emergency numbers (Police, Ambulance and Firefighting brigade) clearly displayed and emergency response signage (assembly point, exit, entrance) provided at strategic and appropriate points;
- 9. It is also recommended that the contractor should avail an incident record and filled on daily basis whenever there is an incident, near miss or injury,
- 10. A Grievance Redress Committee shall be formed at cell level to record and solve grievances on site and register them in a logbook.
- 11. Women should be given priority while recruiting or hiring workers especially the casual labour,
- 12. The contractor should not employ kids less than 18 years and should comply with the national labour law.
- 13. During stringing people shall be informed and proper communication equipment and techniques used.
- 14. Burning of wastes shall be avoided on site,
- 15. Transport of workers shall not be mixed with transport of materials at the same time,
- 16. Proper sign posts (men at work, limit speed, big trucks crossing) shall be provided at all road crossings, residential area and where activities are taking place,
- 17. Mobile toilets like ECOSAN shall be provided at strategic points during project implementation and ensure there a cleaner on full time basis to clean them.
- 18. All workers shall have valid medical insurance "mutuelle de santé" prior to commencement of construction works,
- 19. The contractor shall have valid insurance certificates of the project activities, vehicles and equipment
- 20. Whenever there are scaffolding works or any work at height, workers should be provided with good safety harnesses and proper signage provided at that area to warn workers and residents on the work, taking place,

- 21. A full time and trained health and safety officer should be recruited to work full time;
- 22. Copies of this EHSMP should be displayed in the contractor's offices at all time;

## 22. References

- 1) The Constitution of the Republic of Rwanda, 2003 as revised in 2015
- 2) Law Regulating Labour in Rwanda, 2018.
- 3) Ministerial Order determining modalities of establishing and functioning of occupational health and safety committees, 2012
- 4) Ministerial Order determining conditions for occupational health and safety, 2012
- 5) National Health Policy, 2016
- 6) National Strategy for Transformation (NST 1) 2017 2024
- 7) National sanitation policy, 2016
- 8) National Occupational Safety and Health Strategy, 2019
- 9) Environmental Health Policy, 2008
- 10) World Bank Environmental and Social Framework (ESF)
- 11) IFC Environmental, Health and Safety (EHS) Guidelines for Electric Power Transmission and Distribution.

# **ANNEXES**

# **Annex 1: Incident report template**

HS Report	INITIAL HS IN	CIDENT	Γ REPORT
•			
Date Reported			
Division			
Region			
Office / Sub Location			
Business Unit			
Classification	□ Drill or Inspection		Motor Vehicle Accident
(select one)	<ul> <li>Environmental Incident</li> </ul>		Near Miss
	□ External Event		Property Damage
	□ Hazard		Safety Alert/News/Meeting
	□ I and I – First Aid		Safety Talk Conducted
	□ I and I – Lost Time		Security
	□ I and I – Medical Treatment		
Activity at time of incident	□ External Event		
(select one)	□ Office Base related		
	□ Project Site related		
	□ Travel Related		
	□ Not applicable		

#### **Event Details**

	Tin	ne of Event		
view/modify this item				
rolled office or facility?	0	Yes	0	N/A
	0	No		
d to the Client/ Principal	0	Yes	0	N/A
here the incident	0	No		
Site:				
	crolled office or facility?  If to the Client/ Principal where the incident	view/modify this item  crolled office or facility?  d to the Client/ Principal where the incident	crolled office or facility?  O Yes O No O to the Client/ Principal O Yes O No O Yes O No O No	view/modify this item  trolled office or facility?  No  to the Client/ Principal where the incident  No

### **Injury Details** (Fill out this section if the incident involves an injury)

Injured Person Name	
Injured Person is	□ CEC employee
(select one)	□ Contractor to CEC
	□ Subcontractor/Sub consultant to CEC
	□ Visitor to CEC site
	□ Member of the public
	□ Other

Home Address			
Witness			
Witness Contact Details			
Nature of Injury	□ Amputation		Electric shock
(select one)	☐ Asthma or other respiratory illness		Effects of exposure to the
	☐ Biological illness or Blood born	ele	ments
	pathogen		Fracture
	☐ Bruise, contusion or crushing		Internal injury
	injury		Poisoning or effects of substances
	□ Burn		Psychological
	□ Concussion		Sensory loss
	☐ Cuts/Foreign body penetration		Sprain/Strain
	□ Dermatitis or other skin condition		Superficial injury
	□ Dislocation		Other
Body Part affected	□ Ear		Trunk
(select one)	□ Eye		Back
(Select one)	□ Face		Internal organs
	□ Head		Hip or leg
	□ Neck		Feet or toes
	□ Shoulder or arm		Multiple locations
	☐ Hand or fingers		Not applicable
Cause of Injury	☐ Bite or sting		Muscular stress
(select one)	☐ Contact with object		Physical/mental abuse
(Select one)	□ Struck by object		Trapped between
			Trapped between
			Vehicle accident
	□ Fall from height □ Fall at same level		
Description of Treatments	- Fall at Saille level	Ш	Not otherwise specified
Description of Treatment:			
First aid administered by			
After treatment the injured person	□ Returned to work		
(select one)	□ Went home		
	□ Transported to medical centre		
First full day or shift that injured			
person missed			
Injured person returned to work on			
Injured person returned to			
permanent duties			
Will a compensation claim be	□ Yes		
lodged?	□ No		
(select one)	□ Unsure		
Add additional details if necessary			
,			

### **Annex 2: Take 5 Checklist**

#### **TAKE 5 SAFETY CHECKLIST**

This checklist will help workers and contractors who are working on new or external worksites reduce their exposure to health and safety risks and hazards. It should take 5 minutes to complete.

Comp	any Name:	CEC Ltd						
Date:			Time:					
Speci	fic Location:		Supervisor/Team L	ervisor/Team Leader:				
Task:			Attendees					
Befor	e starting wo	ork:						
1		ceived induction training?		Yes	No	N/A		
2		v the company's health and safety rule	es?	Yes	No	N/A		
3		iliar with how to report hazards and in		Yes	No	N/A		
4		nergency facilities and an evacuation		Yes	No	N/A		
7	for the site?	lengericy racillities and an evacuation	procedure/route	165	NO	IN/A		
_			ما السمد مناما	V	Na	NI/A		
5	-	access to appropriate emergency an	a first ald	Yes	No	N/A		
_	equipment?							
6		ked the person in charge about all rel		Yes	No	N/A		
7		volves a high risk task (such as work		Yes	No	N/A		
	work, confine	ed spaces), is a work permit/safe work	k required?					
8	Do you have safely?	the correct procedures and equipme	nt to do the work	Yes	No	N/A		
9	Is there appr	ropriate separation of vehicles and pe	ople during the	Yes	No	N/A		
10	proposed wo	ork? d electrical/mechanical equipment in a	a safe condition?	Yes	No	N/A		
	•							
11		us/dangerous substances used and s y data sheets?	tored according	Yes	No	N/A		
12		nsulted with workers about the task a	nd the safe way	Yes	No	N/A		
13		all necessary PPE?		Yes	No	N/A		
			our work orog?					
14	Have you go	ot a safe way of getting in and out of you	our work area?	Yes	No	N/A		
15		anual handling risks been identified ar		Yes	No	N/A		
lf you a	<u>ınswer "no" to</u>	any of those above, you may need to	<u>o follow up with the p</u>	<u>person in c</u>	<u>harge before</u>	<u>e you start</u>		
work to	help ensure	<u>your safety.</u>						
	•	-						
At the	end of work	<b>C</b> :						
1		t the worksite in an appropriate condit	tion free from	Yes	No	N/A		
•		risks (clean-up, tools put way, house		100	140	14//		
Raturn		along with your job task sheet to you		or after wo	rk is complet	or at the		
		diorig with your job task sheet to your	r manager/superviso	n aiter woi	K is complet	e or at the		
ena of	your shift.							
Author	rized by:		Title	Date	://	<i>'</i>		
	<b>,</b>			_ 2.00				

Annex 3: The proposed and usage of PPE

Equipment and items	Equipment Area of Use
Safety harnesses	For those working at heights
Ear muffs	For those working in noisy compounds.
Gloves	Handling of toxic materials and cement/concrete
	mixing and doing metal work
Helmets	Within site especially where there is loading and
	offloading of materials and at the construction
	premises and those working at heights.
Dust masks	Areas with dust generation such as concrete mixing
	zones.
Overalls	All construction personnel.
Safety boots/Shoes	All workers at site.
Eye goggles	Where there are activities such as welding or spraying
	or eminent risk of eye contamination or injury.

## Annex 4: List of Content for a Basic First Aid Kit

ITEM	QUANTITY
Instructions for providing first aid – including Cardio-Pulmonary Resuscitation (CPR)	1
Note book and pen	1
Resuscitation face mask or face shield	1
Disposable nitrile examination gloves	5 pairs
Gauze pieces 7.5 x 7.5 cm, sterile (3 per pack) 5 packs	5 packs
Saline (15 ml)	8
Wound cleaning wipe (single 1% Cetrimide BP)	10
Adhesive dressing strips – plastic or fabric (packet of 50)	1
Splinter probes (single use, disposable)	10
Tweezers/forceps	1
Antiseptic liquid/spray (50 ml)	1
Non-adherent wound dressing/pad 5 x 5 cm (small)	6
Non-adherent wound dressing/pad 7.5 x 10 cm (medium)	3
Non-adherent wound dressing/pad 10 x 10 cm (large)	1
Conforming cotton bandage, 5 cm width	3
Conforming cotton bandage, 7.5 cm width	3
Crepe bandage 10 cm (for serious bleeding and pressure application)	1
Scissors	1
Non-stretch, hypoallergenic adhesive tape – 2.5 cm wide roll	1
Safety pins (packet of 6)	1
BPC wound dressings No. 14, medium	1
BPC wound dressings No. 15, large	1
Dressing – Combine Pad 9 x 20 cm	1
Plastic bags - clip seal	1
Triangular bandage (calico or cotton minimum width 90 cm)	2
Emergency rescue blanket (for shock or hypothermia)	1
Eye pad (single use) 4	4
Access to 20 minutes of clean running water or (if this is not available) hydro gel (3.5 gm sachets)	5
Instant ice pack (e.g. for treatment of soft tissue injuries and some stings).	1

# Annex 5: Project locations and details.

Number	Name	Village	Cell	Sector	District	MV Length in Km	LV Length in (m)	Tfo Size in KVA
1	Bweru Mcc	Gatovu	Bugarura	Muhanda	Ngororero	3.67	44	100
2	GS Mataba	Buhoro	Ngoma	Nyamiyaga	Kamonyi	3.62	56	50
3	GS KABERE	Murunyinya	Gaseke	Kayumbu	Kamonyi	1.09	24	50
4	PHS TX NYANKOBWA WPS	Kamarashavu	Kankobwa	Mpanga	Kirehe	2.07	100	100
5	PH TX NTARUKA HC	Rwamuhigi	Ntaruka	Nasho	Kirehe	3.58	36	100
6	TX NASHO HC	Agasasa	Nasho	Mpanga	Kirehe	5.10	82	100
7	PH TX KIGARAMA HC	Gatari	Nyakerera	Kigarama	Kirehe	9.43	253	100
8	Migina MCC	Migina	Migina	Mwiri	Kayonza	9.14	34	100
9	WPS Migera	Migera	Migera	Mwiri	Kayonza	6.84	47	100
10	GS St Isidore	Mparo	Mugina	Mugina	Kamonyi	1.95	17	100
11	Rugalika WPS	Mibirizi	Kigese	Rugalika	Kamonyi	0.78	19	100
12	GS Bugora	Nyarusave	Bugoba	Rukoma	Kamonyi	2.17	78	50
13	GS Gifumba	Kirebe	Gifumba	Nyamabuye	Muhanga	2.17	104	100
14	GS Rongi	Mugwato	Nyamirambo	Rongi	Muhanga	7.77	49	50

15	Murehe GS	Gasharu	Gasagara	Rongi	Muhanga	1.08	39	50
16	Ngoma (Kabacuzi) HC Cyambari		Ngoma	Kabacuzi	Muhanga	2.36	9	100
17	Gitega HC	Kaziba	Gitega	Kibangu	Muhanga	1.18	19	100
18	GASOVU HC	Ntonde	Kanyana	Rugendabari	Muhanga	4.25	24	100
19	Budende HC	Karambi	Budende	Kiyumba	Muhanga	1.87	99	100
20	RONGI SECTOR OFFICE	Mugwato	Nyamirambo	Rongi	Muhanga	0.59	26	50
21	GS Nyamiyaga SS	Nyamiyaga	Gasharu	Rongi	Muhanga	0.91	20	50
	College Notre Dame Ntarabana							
22	SS	Ntarabana	Nyamirambo	Rongi	Muhanga	3.60	23	50
23	Kageyo Sector Office	Rukira	Nyagisozi	Kageyo	Gatsibo	4.77	3	50
24	BURAMBA H.C	Musasa	Buramba	Kabacuzi	Muhanga	3.19	48	100
25	NDEGO HC	Gasabo	Kiyovu	Ndego	Kayonza	0.31	25	100
26	Matunguru Cell	Akabasanza	Matunguru	Rugarama	Gatsibo	0.42	6	50
27	GS Matunguru	Nyabagendwa	Matunguru	Rugarama	Gatsibo	1.51	46	50
28	Nyagashanga Trf	Bwera	Nyagashanga	Karangazi	Nyagatare	4.45	20	100
29	GAKAGATI Trf	Gakagati	Rutungu	Rwimiyaga	Nyagatare	3.60	38	100
30	GS Gitinda	Kayange	Cyanya	Cyuve	Musanze	3.17	65	50

31	Rungu Cell	Kampande	Rungu	Gataraga	Musanze	2.07	36	50
32	Gasakuza WPS	Karwasa	Karwasa	Gacaca	Musanze	0.71	5	100
33	Birambo Cell	Birambo	Birambo	Busengo	Gakenke	0.18	9	50
34	Gahinga Cell	Gahinga	Gahinga	Mugunga	Gakenke	0.58	22	50
35	GS Nyamirango	Nyamirango	Nyamirango	Kanzenze	Rubavu	0.77	32	50
36	HC Karumbi	Kirwa	Kirwa	Murunda	Rutsiro	3.33	18	100
37	Health Center	Ruhingo	Ruhingo	Gihango	Rutsiro	3.69	18	100
38	GS Nyarutovu	Muyunzwe	Muyunzwe	Kinihira	Ruhango	0.76	19	50
39	GS Rwaniro	Gatwaro	Gatwaro	Rwaniro	Huye	3.56	13	50
40	GS MWULIRE	Mwulire	Mwulire	Mbazi	Huye	0.64	35	50
41	Trf Kamonyi	Kamonyi	Kamonyi	Rusasa	Gakenke	2.88	39	100
42	GS BURAMBA SS	Musasa	Buramba	Kabacuzi	Muhanga	0.04	30	50
43	Kigabiro WPS	Bwiza	Bwiza	Kigabiro	Rwamagana	1.11	8	100
44	Nyakarambi Trf	Rubimba	Rubimba	Gahara	Kirehe	0.58	5	100
45	Trf Mutenderi	Mutenderi	Mutenderi	Mutenderi	Ngoma	1.15	13	100
46	Minazi WPS	Munyana	Munyana	Minazi	Gakenke	0.76	16	100
47	GS Kavumu	Binana	Binana	Matyazo	Ngororero	1.00	54	50

### EHSP FOR THE CONSTRUCTION OF LOW AND MEDIUM VOLTAGE LINES UNDER PRODUCTIVE USES SUB-PROJECT

48	Mataba WPS	Kayenzi	Kayenzi	Kayenzi	Kamonyi	0.08	6	100
49	GS Nyarusave	Rugarama	Mwirute	Rukoma	Kamonyi	0.04	13	50
50	Kageyo MCC	Sebasengo	Kageyo	Mwiri	Kayonza	0.02	29	50
51	GS KIRWA CATHOLIQUE	Ntjamena	Kibaga	Rugendabari	Muhanga	0.65	18	50
52	BIYANGA W.P.S	Agatare	Nyagisozi	Kageyo	Gatsibo	1.22	23	100
53	Kibangu Sector	Nkondo	Gitega	Kibangu	Muhanga	5.00	18	50

# Annex 6: Sample of a Permit to Work.

Date and	Name of	Activity to be	Briefed on	Work site	PPE	Duration of	Additional	Signature of	Signature of	Sign off
time	Worker	performed	process and	checked by	checked?	validity and	permit	worker	Project	time
		and location	Risks?	Project engineer		time expiry	needed?		engineer	
01/06/2020	Smith	Excavation	Yes- as per	Yes- risks	Yes- no	4 hours	No	xxxxx	уууууу	12h30
			work under	mitigated	issue					
			confined							
			space							