



OCCUPATIONAL SAFETY HEALTH ENVIRONMENT (OSHE) TRAINING

KITWE VOCATIONAL TRAINING CENTRE (KVTC) COMPUTER LAB

3RD MAY 2023 TO 5TH MAY 2023



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1. Acronyms

AFC:	African Future College
Eng.:	Engineer
ICOH:	Commission on Occupational Health
ILO:	International Labour Organisation
ISO:	International Organization Standardization)
ISSA:	International Social Security Association
KVTC:	Kitwe Vocational Training Centre
LH:	Load Hauling
MLSS:	Ministry Of Labour and Social Security
NAPSA:	National Pension Scheme Authority
NHIMA:	National Health Insurance Management Authority
OHSAS:	Occupational Health and Safety Assessment Series
OSH:	Occupational Safety and Health
OSHE:	Occupational Safety, Health and Environment
PPE:	Personal Protective Equipment
TEVETA:	Technical Education, Vocational and Entrepreneurship Training Authority
TH:	Truck Hauling
WCFCB:	Workers Compensation Fund Control Board
WHO:	World Health Organisation
ZFE:	Zambia Federation of Employers
ZCTU:	Zambia Congress Of Trade Union

2. Introduction

In line with the project staff development program, Kitwe Vocational Training Center (KVTC) trainers and management staff underwent an Occupational, Safety, and Health Environment (OSHE) training. The objective was to equip the team with essential skills for safety and health, ensuring a safe and health learning environment for the upcoming Heavy Equipment Operator (HEO) Training Courses. The training was conducted by an OSHE expert from African Future College (AFC) and took place from May 3rd to May 5th, 2023 at KVTC.

3. Purpose of Training

The following were the objectives of the training:

- ❖ Interpret and apply mandatory legislative requirements meeting industry standards, and best practices in HEO workplace.
- ❖ Apply risk management principles to anticipate, identify, evaluate and control physical, chemical, biological and psychosocial hazards.
- ❖ Collect, manage, and interpret information and data to identify trends and issues in the workplace.
- ❖ Apply basic learning and assessment principles in the design, development and delivery of training and information for differing levels within the workplace.
- ❖ Practice due diligence and employ ethical standards in all aspects of professional conduct.

4. Training Participants

- i. Mr. Chrispin Kakoma
- ii. Mr. Oswald Kabwela
- iii. Mr. Bernard Simumba
- iv. Mr. Harry Sianziba
- v. Mr. Henry Sakala
- vi. Mr. Nawa Liboma
- vii. Mr. Eric Mumbo
- viii. Mr. Moffat Kaoma
- ix. Mr. Sililo Lyomba
- x. Ms. Mainala Maclean Daka
- xi. Mr. Tembo Prince
- xii. Mr. Frank Malenji
- xiii. Mr. Chipso Nkomo
- xiv. Mr. Kalenda Nankonde

5. History of Occupational, Safety and Health Environment

The training commenced with an overview of the history of Occupational Safety and Health Environment (OSHE), tracing its roots back to approximately 1700 BC. It was emphasized that

ISO standards for safety should be universally applied. Furthermore, it was revealed that 85% of accidents are caused by unsafe behavior, while 15% result from unsafe conditions and equipment. The importance of maintaining vigilance towards safety in various settings such as the workshop, practice site and even offices was emphasized.



Eng. Mwape introducing OSHE to the team

The team were introduced to international organizations responsible for OSHE, including the International Labour Organisation (ILO), International Social Security Association (ISSA), International Commission on Occupational Health (ICOH), and World Health Organisation (WHO).

The responsibility for Occupational Safety and Health (OSH) lies with both employers and employees. According to Act 36 of 2010, every institution or company with more than 10 workers should establish an OSH committee, aligned with ILO policies and codes of practice. The committee's role is to engage top management in ensuring workplace safety. Safety should not be overshadowed by profit-oriented perspectives but should receive the attention it deserves. OSHE was metaphorically compared to a Puff Adder snake, which remains inactive and slow but strikes quickly when disturbed. Similarly, the importance of OSHE may not immediately manifest, but neglecting it can lead to disease or accidents that could have been prevented.

5. Rational for Occupational Safety and Health

The facilitator went on to elaborate on the importance and rationale behind OSH, emphasizing the significant human, economic, social, and environmental costs that can be incurred at the enterprise, national, and international levels. Compliance with regulatory requirements was highlighted as essential. When accidents occur, companies experience losses in terms of both time and money. Therefore, it was stressed that investing in workers and protecting their well-being is crucial. The discussion also addressed the tendency of some companies to overlook the importance of safety in the workplace and its implications. Participants were encouraged to prioritize training, enforcement, and safety audits in order to achieve success in this area.

6. Zambian OSH Legislature and Regulatory requirements

- i. The factory - Several regulations dealing with issues including prescribed forms, particulars and other important documentation exist in the factories Act.
- ii. The construction safety and health regulations – these regulations provide safety and health laws for workers engaged in Building.
- iii. Explosive Act to regulate manufacture, use, possession, storage, importation, exportation, transportation and destruction of explosives.

The others include the public Health Act, Industrial and Labour Relations Act etc.

7. Involvement in Health and Safety

The individuals who have a role to play in Occupational Safety and Health Environment (OSHE) include:

- Employers
- Managers
- Contractors
- Supervisors
- Employees
- Health and safety representatives

Employers should provide Personal Protective Equipment (PPE) and aim to ensure their employees safety. According to law, PPE should be provided for free and should not be deducted from the employee's salary. Employees have the duty to take care of themselves and also report cases of exploitation. Everyone should advocate for good health and wellbeing of all employees and decent working conditions.

8. Root Cause Analysis

The training session also included a discussion on the importance of root cause analysis, emphasizing the need to analyze the underlying causes before addressing and resolving a problem. Workplace accidents can be attributed to various factors, including fatigue, intoxication, or lack of experience. Consequently, it is crucial to carefully plan and strategize the execution of work to mitigate these risks.

9. Risk Assessment

The training also session also covered Risk assessment which plays a significant role in reducing and preventing potential risks. By conducting a comprehensive risk assessment, organizations can proactively plan ahead and anticipate potential hazards or accidents. Contractors should regularly review and update risk assessment forms, taking into consideration factors such as safety harness systems, anchor points, and other relevant aspects.

Safety committees are vital in every organisation or institution. The committee can be formulated by the employer by appointing members. The members should promote OSH standards between the employer and employees to ensure safety and health for workers. Share information about Occupational Safety and Health.

10. Site Visit to Sandvik

The objective of the site tour was to introduce and familiarize the team with the implementation of OSH practices within the industry and workshop environment, and also provide the team with firsthand knowledge and awareness, regarding the significance of OSH in maintaining a safe and healthy work setting.



Training participants in the conference room at Sandvik

The site visit progressed as follows:

- i. **Tour of Office Spaces:** The team toured various office areas, including the wellness and sustainability room, kitchen, canteen, and the field service department. Safety features observed in the office setting included fire detectors and portable fire extinguishers for emergency situations. Additionally, energy-saving measures were implemented, such as lights automatically turning off if no one is present in the office for more than 15 minutes.
- ii. **Tour to the Simulator Room and Stores Department:** The team also visited the simulator room and stores department, where similar safety measures were in place, including fire detectors and portable fire extinguishers to address any potential fire hazards.
- iii. **Tour of Heavy Equipment Machinery Parking Site:** The team visited the machine parking site where it was observed that each machine in the parking area was equipped with emergency stop switches located on the front side, allowing for quick shutdown by another individual in case of an emergency. Once the switch is engaged, the machine cannot be started again until this switch is reset. Additionally, each machine was

equipped with at least two fire suppression systems for enhanced safety measures, with one being operated manually and the other automatically. To prevent movement or sliding when parked, chock blocks were utilized to secure the machines in position and prevent unintended rolling or movement.

- iv. **Tour of the Workshop Setting:** Toured the workshop area. Notable safety features and measures included clearly designated walkways that must be kept clear at all times, without any tools obstructing them. The safety manager emphasized the importance of personal protective equipment (PPE) for all individuals accessing the workshop, and highlighted that safety talks are conducted every morning before work commences to ensure the well-being of employees. The team inquired about potential hazards in the workshop, and the manager mentioned risks associated with the overhead crane, oils, and forklifts. The workshop prioritizes cleanliness and maintenance, with regular inspections and servicing of the overhead crane. Fire safety provisions, such as a designated fire point, a 30-meter-long fire hose, fire glass, and fire extinguishers, were also present in the workshop. It was also mentioned that safety topics are shared on a weekly basis, and workers are encouraged to review manuals to refresh their knowledge and skills. Coping strategies for stress or fatigue are also taught to the workers. Accidental incidents are shared and displayed on the notice board for future reference and planning. Furthermore, the workshop is up to date with ISO standards, currently implementing ISO 45001, and remains compliant with relevant ILO and local regulations by actively staying informed about legal requirements.

The visit provided the team with an opportunity to observe the practical implementation of OSHE practices, therefore, bridging the gap between theoretical knowledge and practical application.

11. Back to Training Institution

The team returned to KVTC and continued with the training. This session was focused on risk assessment and why it is important for any organisation or institution. The facilitator taught that in risk assessment it is vital to identify the hazards first, later on plan, do, check and Action. The plan, do, check and action are a cycle and is demonstrated below:



Risk assessment steps

As part of evaluating the participants' excursion to Sandvik the team was divided into three groups and were given group assignments as follows:

Group 1: Tasked to discuss the impact of Artificial Intelligence Operations that have been deployed in the Zambian Mining Sector as presented at SANDVIK

Group 2: Tasked to discuss why the Emergency Stop Switches (ESS) observed during the SANDVIK Tour are placed outside the operator's cabin in two or three distinctive positions. How does this ESS System help mitigate RISKS during Mining Operations

Group 3: Tasked to discuss and review the entire Tour Procedures in terms of Risks and how improvements could be done to OSH Management. In particular, the group was tasked to review the following procedures:

Due to time, the exercise presentations were made on the last day of the training. The first group focused on the pros and cons of Artificial Intelligence and the second group used the hierarchy of risk reduction to present their work, which are elimination, substitution, engineering control, safety system and Personal Protective Equipment. The third group were able to identify the risks associated.



OSHE training participants pose for a photo on the last day of the training

12. Challenges

- i. The team intended to have an additional practical tour to one more firm, which was not successful due to time constraints and confirmations.
- ii. Due to the training taking place at KVTC, some participants encountered disturbances as they were required to attend to additional responsibilities within the institution.
- iii. The training duration wasn't enough to assimilate the training content.

13. Recommendations

Based on the OSHE training conducted the following recommendations were noted by the team:

- i. More trainings in OSHE should be organized.

- ii. KVTC management should consider to formulate an OSHE committee.
- iii. KVTC should consider maintaining a notice board with workshop's emergency response procedures, including fire safety measures, and first aid arrangements.
- iv. KVTC should consider to adopt and implement the latest ISO standard which is ISO 45001.
- v. Conduct trainings outside of KVTC to prevent disruptions.

14: Training materials

The training materials used in the three day training were shared with training participants for future reference.

14. Conclusion

In conclusion, this training was highly beneficial to all participants as safety impacts both our work and home environments. The team gained insight into promoting safe work practices, , adherence to protocols, and the importance of maintaining a clean and organized work area to prevent accidents. Furthermore, the team learned about the importance of prompt and effective emergency response.

STAFF DEVELOPMENT

TOT – OSHE TRAINING

Kitwe Vocational Training Centre

3rd May, 2023 to 5th May, 2023



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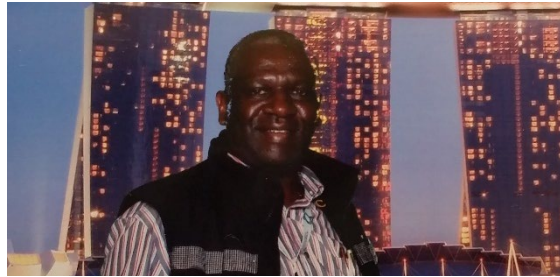


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Facilitator Biography



Name: Eng. Francis Xavier Mwape

Bio: Eng. Francis Xavier Mwape currently serves as the **Director & Principal of African Future College**. He possesses a Master of Business Administration specializing in International Business, which he obtained from Edith Cowan University in Australia. Additionally, he holds a Bachelor of Engineering degree in Civil and Industrial Buildings, acquired from Northern Jiaotong University in Beijing, China. Eng. Mwape's expertise in Occupational Safety and Health credentials stem from post graduate training by the International Labour Organisation Training Centre of Turin, Italy and the Zambia Bureau of Standards. He also holds a Prosecution Certificate from Zambia Institute of Advanced Legal Education (ZIALE).

Facilitating: Occupational Safety, and Health Environment (OSHE) Training

Affiliations: His professional membership includes Fellow of the Engineering Institution of Zambia, member of the Association of Consulting Engineers in Zambia and Incorporate Membership to the Chartered Institute of Building (CIOB) of UK.

Years in Experience: Eng. Mwape previously worked as a Principal of the National Council for Construction (NCC) School from 2006 to 2015 in Zambia. Before joining NCC in 2006, Eng. Mwape had previously worked in the construction industry, Water and Sewerage Company (Public Utility Company) and a property development corporation over a period of 15 years. He also served as vice president of the EIZ from 2012 to 2014 and a Board Member of the NRFA from 2010 to 2013. Eng. Mwape also worked as Technical Delegate and CEO of the WorldSkills Zambia (a member of WorldSkills International (WSI) from 2015 to 2018. While serving as Technical Delegate, he was appointed to serve as a Jury President and Member of the WSI -Occupational Safety and Health Committee at the WorldSkills International Competitions of 2015 and 2017 –WSI bi-annual VET Skills Competitions that were held in Sao Paulo - Brazil and Abu Dhabi –UAE respectively.

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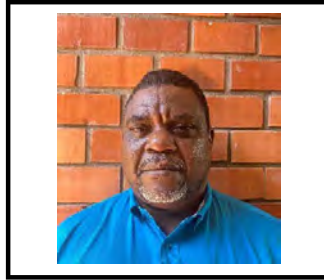


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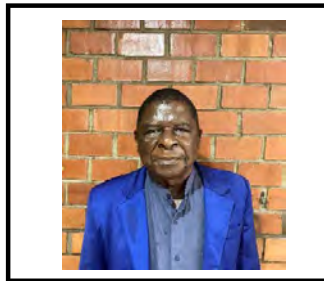
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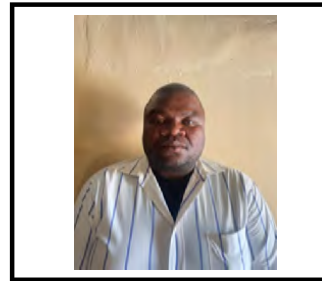
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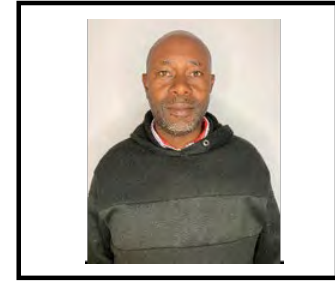
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Name: | Harry Sianziba



| Frank Malenji



| Henry Sakala

TRAINING ATTENDIES



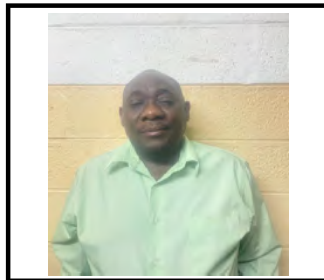
Name: | Mainala Daka



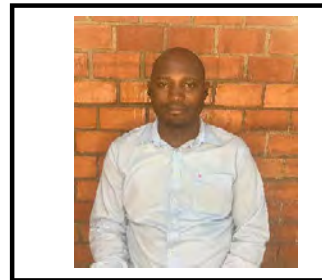
Name: | Lyomba Sililo



Name: | Erick Mumbo



Name: | Moffat Kaoma

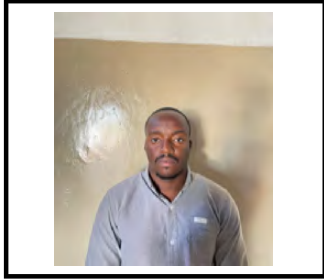


Name: | Prince Tembo

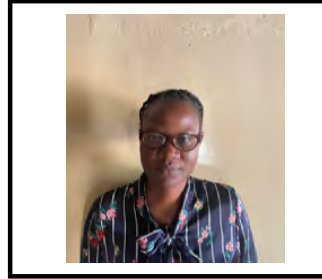


Name: | Nawa Liboma

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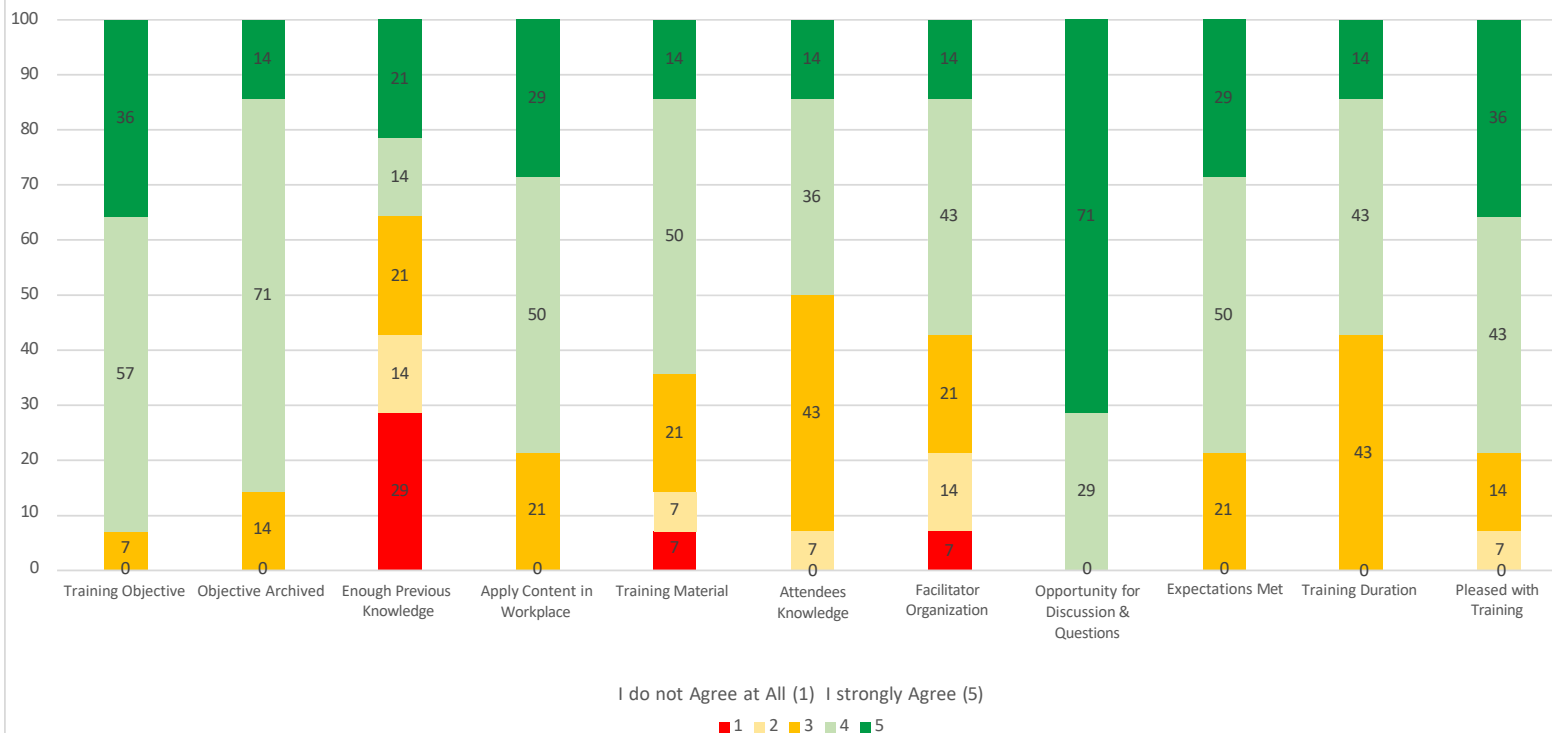
Name: | Chipo Nkomo



| Kalenda Nankonde

Course	Training of Trainers	Start Date	03-May-23	Facilitator	African Future College
Venue	Kitwe Vocational Training Centre	End Date	05-May-23	Assistant	Nil

TRAINING CONTENT FEEDBACK REPORT



What did you find most beneficial?

- ❖ The industrial tour and ILO encyclopaedia shared were beneficial because I can equip myself with more knowledge
- ❖ ILO materials for training
- ❖ Theory and practicals
- ❖ Shared notes and visit to Sandvik
- ❖ The importance of health and safety in an organisation
- ❖ The ILO standards and how it helps the safety of working environment
- ❖ The training as a whole
- ❖ The familiarization tour at Sandvik
- ❖ The industrial tour
- ❖ Site visit to Sandvik
- ❖ The presentation and content of the training was practical
- ❖ Safety should always be observed



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What did you find least beneficial?

- ❖ Nothing
- ❖ The encyclopaedia
- ❖ Theory
- ❖ The long hours in the training
- ❖ Nothing everything was relevant
- ❖ Non



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Any other points of view?

- ❖ Time management should be strictly observed
- ❖ The training duration was not enough
- ❖ More practicals could have been better
- ❖ Timetable was not adequate
- ❖ More practicals are necessary
- ❖ More trainings in OSHE should be organized
- ❖ Trainings should not be conducted consecutively, there has to be at least two weeks space in between trainings
- ❖ Trainings should be organized outside the training institution (KVTC) because if within the workstation, there are disturbances to go and attend to other duties within the institution
- ❖ Non



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