

GOVERNMENT CHEMIST LABORATORY AUTHORITY (GCLA)

MANAGEMENT OF WATER TREATMENT CHEMICALS

*PRESENTED TO WATER SUPPLY AND SANITATION AUTHORITIES
MEETING*

ST.GASPAR - DODOMA

21ST MARCH 2019

**Presented
By MUSA KUZUMILA, GCLA - CZL - Dodoma**



CONTENTS

1. A BRIEF ABOUT GOVERNMENT CHEMIST LABORATORY AUTHORITY
2. THE INDUSTRIAL AND CONSUMER CHEMICALS (MANAGEMENT & CONTROL) ACT.NO.3, 2003
3. CHEMICALS MANAGEMENT SYSTEM (CMS)
4. CHEMICALS PURCHASING PRACTICE
5. CONCLUSION



1. GOVERNMENT CHEMIST LAB. AUTHORITY (GCLA)

- The Government Chemist Laboratory Authority (GCLA) is an autonomous Executive Authority under the Ministry of Health, Social Welfare, Community Development, Gender and Elderly.
- It is among of the oldest Government Institution (1895 - todate).
- Mr. Gustav Giemsa – 1st CGC (1897-1898) developed a stain for identification of malaria.



1. GCLA cont..



A Historical building that was used for Laboratory activities

1. GCLA cont...

- TRANSFORMATIONS OF THE INSTITUTION
- On 26th March 1999 Government Chemist Laboratory was transformed into a Government Executive Agency in accordance with the Executive Agency Act No. 30 of 1997 - It became Government Chemist Laboratory Agency (GCLA)
- Since 23rd September, 2016 - Transformed into an **Authority** in accordance with the Government Chemist Laboratory Authority Act. No. 08 of 2016.
- It maintains its abbreviation as "**GCLA**" (Government Chemist Laboratory Authority).



1. GCLA cont..

FUNCTIONS OF GCLA

➤ Laboratory Analytical services

- ❖ Forensic chemistry
- ❖ Forensic toxicology
- ❖ Forensic Biology and DNA
- ❖ Chemicals/Environmental
- ❖ Food and Drugs
- ❖ Microbiology



1.2FUNCTIONS cont...

➤ Regulatory functions

- ❖ GCLA Act.No.8 of 2016 – Management of chemical labs, forensic labs and HDNA labs
- ❖ Industrial and Consumer Chemicals (Mgt & Control)Act. No.3, 2003.
- ❖ Human DNA Regulations Act, 2009

➤ Consultancy services

➤ Manage the National Poison Control Center (NPCC)

1. 3DIRECTORATE

1. Forensic Science and DNA Services
2. Chemicals Management
3. Products Quality Services
4. Business Development

1. 4 ZONAL OFFICES

1. Eastern Zone Office - at Headquarters, Barack Obama Drive, DSM.
2. Lake Zone Laboratory - at Isamilo area near Sekou Toure Regional Hospital, Mwanza.
3. Southern Highlands Zone Office - at Mbeya Regional Hospital, New Forest Area, Mbeya.
4. Northern Zone Office - at Themis Health Centre, Arusha.
5. Southern Zone Office - at Ushirika House, TANU Road, Mtwara.
6. Central Zone - at area C adjacent to Capital Lodge.

2. INDUSTRIAL AND CONSUMER CHEMICALS (Management and Control) ACT.NO.3, 2003

- Industrial and Consumer Chemicals (Management and Control) Act No.3 of 2003 provides for the management and control of:
- Production,
 - Importation,
 - Transportation,
 - Exportation,
 - Storage,
 - Dealing and
 - Disposal of chemicals.

2.1 CONTROL OF CHEMICALS UNDER ICCA

It covers the chemicals life cycle:

- Production, importation, exportation, transportation, storage and dealing in chemicals.

THROUGH

- ❖ Registration → chemicals, company/dealer, premise.
- ❖ Certification → Importer, user, producer, distributor, transporter, exporter
- ❖ Restriction → dealing in chemicals, banning and elimination of chemicals, prohibition
- ❖ Inspection → premises, ports of entries

2.2 MANAGEMENT OF CHEMICALS UNDER ICCA

- Labelling and safe handling
- Chemicals and chemical wastes
- Disposal of chemical wastes
- Prevention and management of accident
- Management of spills and contaminated sites

3. CHEMICALS MANAGEMENT SYSTEM (CMS)

- A Chemical Management System is a process that ensures proper control and management of chemicals starting from the procurement process, transportation, storage, use and disposal of chemicals waste.
- A chemicals management team should be established to establish and implement the CMS.



3.1 STEPS FOR CMS

1. THE COMMITMENTS OF THE TOP MANAGEMENT
2. ASSESSMENT, PLANNING AND PRIORITIZATION
3. CHEMICALS MANAGEMENT
4. MONITOR
5. MANAGEMENT REVIEW



3.1.1 THE COMMITMENTS OF THE TOP MANAGEMENT

“Policy Statement of chemical management”



3.1.2 . ASSESSMENT, PLANNING AND PRIORITIZATION

- a) Systematically **identify and document** chemicals used and stored
- b) Regulatory Assessment -**Monitoring Regulations and Permits, Verification of Compliance**
- c) Procurement/Supplier Practices- **Chemical Purchasing Policy, SOP for Supplier Approval and Removal**
- d) Chemical Risk Assessment
- e) Chemicals and processes of concern
- f) Performance Goals and Action Plans

3.1.3.CHEMICALS MANAGEMENT

- a) **Organizational Structure** - Roles and Responsibilities, Communication
- b) **Training** – Management responsibilities, Regulatory requirements, Work Practices
- c) Document Development - **CMS Manual**
- d) **Work Practices**

3.1.3.CHEMICALS MANAGEMENT.....

Work Practices cont...

- ✓ Exposure Control Measures,
- ✓ Safety Data Sheet Management - Procedure to Make SDSs Readily Available for Every Chemical
- ✓ Chemical purchasing procedures - good purchasing practices
- ✓ Chemical Handling - Procedures for Safe Chemical Handling as per MSDS
- ✓ Chemical Storage – Procedure for Chemical Storage
- ✓ Chemical Transportation – Procedure for Chemical Transportation and Training on Transport of a Chemical
- ✓ Chemical Labelling - Procedure for Chemical Labelling
- ✓ Maintenance and Housekeeping

3.1.3 CHEMICALS MANAGEMENT.....

Work Practices cont...

- ✓ Emergency Procedures - Emergency Response Plan - covering emergency exits and an alarm system for evacuation, outline duties and responsibilities for first-aid and fire fighting in the company, Provision of equipment such as fire extinguishers, first aid kits, spills kits, emergency water shower, etc.
- ✓ Personal Protective Equipment – procedure for provision and enforcement on the use of PPEs

3.1.3. CHEMICALS MANAGEMENT.....

Work Practices cont...

- ✓ ***Chemical Use*** – Regular and Optimization (Rules: Use a first-in/first-out policy), Perform regular inventory audits to identify chemicals that are not being used, ascertain the quality of chemicals, Use ventilation systems to reduce chemical inhalation of dust/fumes, etc.

3.1.4. MONITOR

Monitor and Measurement (Continuous improvements) - Regulatory Compliance

- ✓ Internal Audit
- ✓ External Audit

3.1.4. MANAGEMENT REVIEW

The outcome of the monitoring exercise is discussed by the **management team** and come with **improvement measures**

4. CHEMICALS PURCHASING PRACTICE

Should be guided by Chemical Purchasing Policy:

- Tighten purchasing controls: Quality driven
- Consider disposal cost at time of purchase
- Consider handling and disposal requirements
- Reduce expired stock
- Use older stock first
- Avoid chemical donations: unless they meet a specific need

4.CHEMICALS PURCHASING PRACTICE cont..

- Avoiding purchases which may lead to excessive waste/obsolete chemicals generation
- Purchase should not be driven by cheap price

Consider the following:

- ▶ Consumption rate
- ▶ Expiry dates of the chemicals
- ▶ Quality
- ▶ Hazardousness of the chemical /possibility of substitution with less hazardous chemicals

4. CHEMICALS PURCHASING PRACTICE cont..

Receiving of chemicals:

- ❖ Chemicals must be checked for quality (lab analysis) and ensure that the containers are in good condition
- ❖ The product is the **correct substance** as ordered and the packaging is free from contamination.
- ❖ Chemicals have **clear labelling** and damaged packages are returned to supplier
- ❖ Expiration dates must be determined
 - ▶ Chemicals that are expired and/or appear to be no longer useful are considered **hazardous waste**.

5. CONCLUSION

Fulfill your responsibilities in establishing and implementing a “Chemicals management system” to ensure safety of workers as well as use of good quality chemicals in water treatment.

www.gcla.go.tz



ASANTENI SANA

