



Put chemical management into practice

ESTABLISH ORGANIZATIONAL FRAMEWORK AND COMMUNICATION PRACTICES

Establish organisational framework and communication practices



In this session

- Requirements as per ZDHC CMS
- Assigning CMS roles and responsibilities
- CMS communication practice
- CMS document and record requirements and control

Requirements as per ZDHC



ZDHC CMS references:

- **3.1 Organisational Structure**
 - 3.1.1 Roles and responsibilities
 - 3.1.2 Communication
- **3.3 Document Development**
- **3.4 Document and Record Control**

Requirements as per ZDHC



Expected deliverables as per ZDHC CMS

- CMS organisational chart
- Safety Communication/
Hazardous Chemical
Placards/Posted PPE,
Warnings
- CMS Manual
- Procedure to control
documents and records

Assigning roles and responsibilities

For consideration

- Which roles are there in the CMS?
- What are the respective responsibilities?
- Which sections/department/organisation units would be responsible for what role?
- What are the specific related tasks?
- What roles and responsibilities already exist in your company's management system? Where are the opportunities for integration and linking the CMS?



Assigning roles and responsibilities

Roles assigned for	Specific responsibilities
 <p>CMS oversight</p>	<ul style="list-style-type: none"> • Reports to senior leadership • Responsible for day-to-day management of CMS • Responsible for tracking progress on key performance indicators (KPIs) and goals
<p>Regulatory compliance</p>	<ul style="list-style-type: none"> • Systematically monitors applicable regulations on a regular schedule for each applicable legal jurisdiction • Identifies new or changing compliance requirements
<p>RSL and MRSL oversight</p>	<ul style="list-style-type: none"> • Responsible for RSL and MRSL compliance and communication with supply chain partners
<p>Chemical application and management</p>	<ul style="list-style-type: none"> • Responsible for process and product chemical knowledge • Responsible for knowing the contact names of individuals at supply chain partner organisations with the same duties
<p>Hazard assessment and risk management</p>	<ul style="list-style-type: none"> • Responsible for activities related to chemical hazard assessment • Responsible for knowing the contact names of individuals at supply chain partner organisations with the same duties
<p>Alternatives assessment</p>	<ul style="list-style-type: none"> • Responsible for activities related to safer alternative assessment and communicating information to supply chain partners
<p>Community of practice and sustainable chemistry</p>	<ul style="list-style-type: none"> • Acts as organisation's representative for Chemical Management Community of Practice • Responsible for chemicals management and sustainable chemistry metrics

Ref. ZDC CMS - 3.1.1 Roles and Responsibilities

Assigning roles and responsibilities

Example

Section	Responsibility
Purchase	<ul style="list-style-type: none">• Develop and implement controls for chemical purchases
Human resources	<ul style="list-style-type: none">• Define competency requirements and job descriptions for various CMS roles• Integrate chemical management into reward, discipline and appraisal systems
Maintenance	<ul style="list-style-type: none">• Implement preventive maintenance program for key equipment (e.g. dosing pumps, secondary containment, storage arrangements,...)
Engineering	<ul style="list-style-type: none">• Consider EHS impacts of new or modified products and processes• Identify chemical pollution/hazard prevention opportunities
Top management	<ul style="list-style-type: none">• Communicate importance of CMS throughout organization• Provide necessary resources• Track and review CMS performance
Production	<ul style="list-style-type: none">• Provide first-hand knowledge of chemicals' EHS aspects of their operations• Implement good practices for resource efficient management of chemicals• Support training for new employees
...	...

Assigning roles and responsibilities

Develop a responsibility matrix

L...Lead role, S...Supporting role

Example	Plant Mgr	EHS Mgr	HR Mgr.	Purchase officer	Maintenance in-charge	Production Mgr.	Super-visor	Worker	ETP in-charge	...
Communicate importance of CMS	L	S	S			S	S			
Coordinate audit efforts		L			S	S				
Obtain permits and compliance plan		L			S	S			S	
Train staff on CMS and good practices		S	L			S	S			
Identify, assess and document chemical hazards and risk	S	L	S	S	S	S	S	S	S	
Establish objectives and targets, action plans	L	S	S	S		S			S	
Maintain CMS records		L								
.....										

Assigning roles and responsibilities



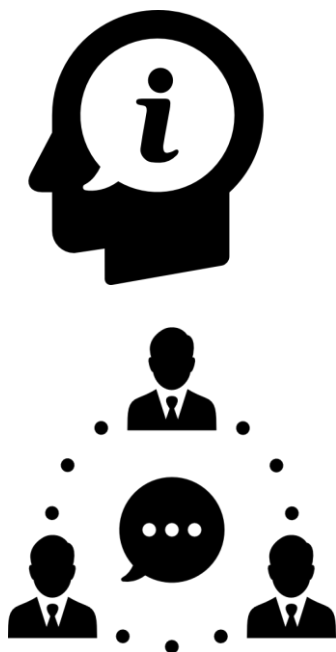
Action points

- Prepare the responsibility matrix or similar document
- Incorporate CMS related roles, responsibilities and tasks into the respective job descriptions
- Define/Add the required competencies (CMS knowledge, skills,..)
- Provide access to/Implement competence development programmes (training, hiring of qualified persons,...)

CMS Communication



ZDHC CMS 3.1.2 Communication



- Establish, document and implement a process for communicating about the CMS amongst all of levels of the organisation.
- An organisation also should establish, document and implement a process for receiving and responding to external stakeholders, including documenting communications

CMS Communication



ZDHC CMS 3.1.2 Communication



Example of audit questions

- Does the facility have a current (chemical) SDS for each chemical, provided in the local language and placed in chemical handling and storage areas? (CMW 2.1.2)
- Has management established procedures that clearly define and communicate the areas in which authorised personnel are allowed to enter? (Primary focus is chemicals.) (CMW 2.1.5)

CMS communication

Types of communication

- Safety communication (instructions, training)
- Hazardous chemical placards
- Posted PPEs
- Warning signs
- Awareness posters



Chemical Symbols

Look Out For These Symbols On The Chemical Containers & Understand Their Meanings

Oxidizers May cause severe burns. May cause or aggravate fire. May cause or aggravate explosion. May cause or aggravate reaction with water, acids, or bases.	Corrosives May cause severe damage to body parts. May cause or aggravate skin burns. May cause or aggravate eye damage.	Toxicity (Severe) May cause or aggravate severe health effects. May cause or aggravate severe respiratory effects. May cause or aggravate severe reproductive effects.
Environmental Toxicity May cause or aggravate environmental damage. May cause or aggravate damage to aquatic life. May cause or aggravate damage to terrestrial life.	Gases Under Pressure May cause or aggravate explosion. May cause or aggravate severe health effects. May cause or aggravate severe respiratory effects.	Explosive Self Reactors May cause or aggravate explosion. May cause or aggravate severe health effects. May cause or aggravate severe respiratory effects.
Carcinogen - Respiratory Sensitizer May cause or aggravate cancer. May cause or aggravate severe respiratory effects. May cause or aggravate severe reproductive effects.	Flammables - Self Reactives May cause or aggravate fire. May cause or aggravate explosion. May cause or aggravate severe health effects. May cause or aggravate severe respiratory effects.	Irritant - Dermal Sensitizer May cause or aggravate skin irritation. May cause or aggravate severe skin effects. May cause or aggravate severe respiratory effects.



DANGER
Corrosive materials

Hand protection must be worn

KNOW YOUR FIRE EXTINGUISHERS COLOUR CODES

WATER	DRY POWDER	CO ₂ CARBON DIOXIDE	AFFF FOAM SPRAY	FIRE BLANKET	WET CHEMICAL
<ul style="list-style-type: none"> Water Class A Class B Class C Class D Class K 	<ul style="list-style-type: none"> Dry Powder Class A Class B Class C Class D Class K 	<ul style="list-style-type: none"> CO₂ Carbon Dioxide Class B Class C Class D Class K 	<ul style="list-style-type: none"> AFFF Foam Spray Class A Class B Class C Class D Class K 	<ul style="list-style-type: none"> Fire Blanket Class A Class B Class C Class D Class K 	<ul style="list-style-type: none"> Wet Chemical Class A Class B Class C Class D Class K

Warning

Chemical store

No unauthorised access

CMS communication



Aim for effective communication

- What do I want to communicate?
- To whom do I want to communicate?
- Why do I want to communicate that?
- How can I communicate that?

Accessibility of information



Exercise – CMS communication

In groups,

- review the safety data sheet and decide which information the different stakeholders will need – use worksheet **xx** distributed.
- reflect in which places in a company the safety data sheets should be available
- Suggest how content of safety data sheet can be made available to different stakeholder groups

Time 45 min

CMS Document development

ZDHC CMS 3.3 - Document development



CMS Manual content

- Documented statements of a chemical policy and chemical objectives
- Documented procedures and records required by this manual
- Documents, including records, determined by the organisation to be necessary to ensure the effective planning, operation and control of its processes

CMS Document development

CMS Manual content

- Company policy
- Organisation chart with responsibilities (e.g. matrix)
- Company chemical policy
- Legal and Other Requirements with reference to relevant procedure (e.g. for identification of legal requirements, maintaining legal inventory,...)
- Objectives, targets and programme(s)
- Resources, roles, responsibility and authority
- Competences, training and awareness
- Documentation
- ...

Refer to the relevant standard such as ZHDC, describing your companies commitment

CMS Document development

CMS Manual content

Example - Legal and Other Requirements

Ref. ZDHC 2.2 Regulatory Assessment

COMPANY NAME chemical management permits as well as other requirements that the company subscribes to which relates to the company's chemical aspects.....

COMPANY NAME shall identify all relevant regulations, codes of practice and guidelines that are applicable to the chemical aspects of its activities, products and services, and record this information in the inventory of legal and other requirements.

COMPANY NAME shall keep this information up-to-date.

Relevant procedure : CMS-P 201 Procedure for review of legal and other requirements

....

CMS Document development

In appendix A include cross references of standards requirements (e.g. ZDHC) and sections in the CMS manual and CMS procedures.

For example

ZDHC Section	ZDHC CMS Ref.	CMS Procedure Ref. No.
...
Legal and other requirements	2.2.1 Monitoring Regulations and permits	CMS-P 201
...

Appendix B Controlled Document List

Document No.	
...	...
CMS-P 201	Procedure for review of legal and other requirements
...	...

Document and record control

ZDHC CMS 3.4 - Document and record control

Establish, document and implement a process for controlling documents and records associated with the CMS.

The document control process should ensure that:

- Documents are approved for adequacy prior to use
- Correct versions are available at points of use and versions are tracked
- Documents are legible, updated and re-approved as needed



Document and record control



Document

- Can be revised
- Revision date
- Used to support an effective and efficient organizational operation
- Generated during planning of PDCA cycle

Record

- Cannot be revised
- Specific date
- Provide evidence that processes that make up your CMS are being implemented as described
- Generated in the “do” and “check” phase of PDCA cycle

Document and record control



Document

- Can be revised
- Revision date
- Used to support an effective and efficient organizational operation
- Generated during planning of PDCA cycle

Record

- Cannot be revised
- Specific date
- Provide evidence that processes that make up your CMS are being implemented as described
- Generated in the “do” and “check” phase of PDCA cycle

Document and record control

Key questions for record control

- What records are kept?
- Who keeps them?
- Where are they kept?
- How are they kept?
- How long are they kept?
- How are they accessed?
- How are they disposed?



Document and record control

Establish a documented record keeping procedure to:

1. Approve documents for adequacy prior to issue (name and signature)
2. Review, update and re-approve documents (set frequency)
3. Ensure that changes and the current revision status of documents are identified (documents with revision numbers)
4. Ensure that the most up to date versions of documents are available at the appropriate points of use
5. Ensure that documents are legible and readily identifiable
6. Ensure that documents of external origin, determined by the organisation to be necessary for the planning and operation of the CMS, are identified and their distribution controlled
7. Prevent the unintended use of obsolete documents and apply suitable identification to the files

Document and record control

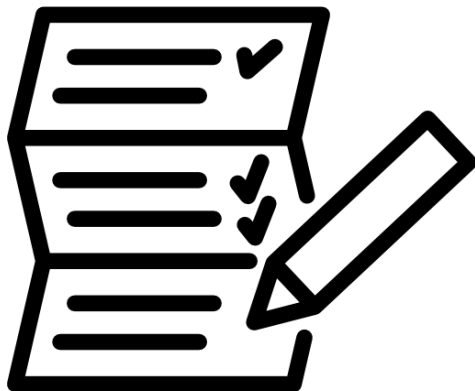
Type of records to keep (Example)

- Legal, regulatory and other code requirements
- Chemical inventories
- List of approved suppliers
- Chemical supplier declarations
- Reports of progress towards meeting objectives and targets
- Permits, licenses and other approvals
- Job descriptions and performance evaluations
- Training records
- CMS audit and regulatory compliance audit reports
- Reports of identified nonconformities, corrective action plans and corrective action tracking data
- Hazardous material spill / other incident reports
- Communications with customers, suppliers, contractors and other external parties
- Results of management reviews
- Sampling and monitoring data
- Maintenance records and equipment calibration records



Elements of a procedure

Example



- Document identifier
- Purpose
- Scope
- Relevant forms
- References
- Definitions
- Exclusions
- General rules or guidelines
- Methods/Description of steps
- Frequency
- Relevant documents and records to be kept
- Date established/revised
- Prepared/Revised/Approved by

Elements of a procedure

Internal audit (Example)

Document header

CMS 002	Internal audit procedure	version 1	03/06/2015
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Identification code for document reference in CMS manual



Title of document



Version number to track and ensure only latest version is in use



Date of revision

Document footer

Written by		Checked by		Approved by	
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Elements of a procedure

Internal audit (Example)



CMS-P 900	Internal audit procedure	version 1	03/06/2015
1. Purpose	The purpose of this procedure is to define the process for executing periodic audits of the chemical management system. The procedure describes the process for planning, executing and reporting the audits. This procedure covers all internal audits which are carried out within our company.		
2. Scope	The scope of the internal audits includes all activities and process of the chemical management system or some of its elements.		
3. Forms to use	CMS –F 901 Audit preparation CMS - F 902 Audit questionnaire CMS - F 903 Audit reporting CMS-F...		
4. References	ZDHC CMS Section 4.2		
5. Definitions	n.a.		
6. Exclusions	n.a.		
7. General rules	Internal audits help to ensure the right implementation and maintenance of the chemical management system by verifying that the activities are in accordance with the documented procedures and that corrective measures are effectuated and that they are efficacious. All audits are performed by trained auditors. The training of auditors is in accordance with procedure CMS-P-7xx. Records of the auditor training are retained in accordance with procedure CMS-P-7xx.		

Written by		Checked by		Approved by	
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Elements of a procedure

Internal audit (Example)



CMS-P 900	Internal audit procedure	version 1	03/06/2015
8. Methods	8.1. Selection of the audit team:..... 8.2. Orientation of the audit team.... 8.3. Written audit plan.... 8.4. Prior notice... 8.5. Execution of the audit... 8.6. Reporting the audit results... 8.7. Distribution of the audit report.... 8.8. Follow-up of the audit... 8.9. Records: The audit reports are stored at least two years after the execution of the audit. The EHS manager is responsible for preserving these reports....		
9. Records	Records have to be retained as specified in this procedure.		

Registration of change

Date of change	Description	Sections concerned

Written by		Checked by		Approved by	
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Establish organisational framework and communication practices



Any questions?