



مجلس أبوظبي للجودة والمطابقة
ABU DHABI QUALITY & CONFORMITY COUNCIL

ABU DHABI OCCUPATIONAL TERMS

Water Tanks Cleaner (Public Drinking Water Tanks).



ADOT 91 /2018
FIRST EDITION



Table of Contents

Amendment Page.....	Error!
Bookmark not defined.	
1.About the Abu Dhabi Quality & Conformity Council.....	3
2.Foreword.....	3
3.Acknowledgements.....	4
4.Occupational Terms.....	5
5. Knowledge and Understanding.....	11
6. Other Skills	14
7. References.....	15



1-About the Abu Dhabi Quality & Conformity Council

The Abu Dhabi Quality and Conformity Council (QCC) was established by law No. 3 of 2009, issued by His Highness Sheikh Khalifa Bin Zayed Al Nahyan, President of the UAE. QCC is responsible for the development of Abu Dhabi Emirate's Quality Infrastructure, which enables industry and regulators to ensure that products, systems and personnel can be tested and certified to UAE and international standards.

Products and services certified by QCC receive the Abu Dhabi Trustmark. The Trustmark is designed to communicate that a product or system conforms to various safety and performance standards that are set by Abu Dhabi regulators.

2-Foreword

The QCC water tanks cleaning and maintenance working group was initiated in January 2018 in order to establish occupational terms for workers in the water tanks cleaning and maintenance sector in Abu Dhabi in order to elevate the quality of services provided in the sector and to promote the safety and productivity of personnel.

The occupational terms are professional standards that specialist personnel must meet in order to perform the jobs they are assigned to, in order to produce quality outcomes. The Government of Abu Dhabi, under the leadership of His Highness Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE and Ruler of Abu Dhabi, and His Highness Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, Deputy Supreme Commander of the UAE Armed Forces and Chairman of the Abu Dhabi Executive Council, has invested heavily, and at high levels of professionalism and safety, in the infrastructure of Abu Dhabi. Therefore, it is crucial and obligatory to encourage the presence of skilled workmanship to maintain the quality infrastructure value in the Emirate of Abu Dhabi in particular and the United Arab Emirates in general.



3-Acknowledgments

The QCC would like to thank the members of the working group listed below:

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10	Jomon Thomas	Khidmah LLC
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4-Occupational Terms

No.	Field	Details										
1.	Occupation (Standard Unit)	Water Tanks Cleaner (Public Drinking Water Tanks).										
2.	Description	This standard specifies the qualifications and skills required from the water tanks cleaner to perform cleaning and disinfection (cleaner level) to the public drinking water tanks, and to apply the best practices for cleaning and disinfection procedures and techniques.										
3.	Unit type	<input type="checkbox"/> Knowledge and Skills OR <input checked="" type="checkbox"/> Application										
4.	Elements	<table border="1"> <thead> <tr> <th>No.</th> <th>Element</th> </tr> </thead> <tbody> <tr> <td>E1</td> <td>Apply best practices for cleaning and disinfection procedures and techniques.</td> </tr> <tr> <td>E2</td> <td>Understand the basic knowledge of cleaning and disinfection equipment and its use</td> </tr> <tr> <td>E3</td> <td>Know about Customer Water Storage Tank Types, Basic Design and operation</td> </tr> <tr> <td>E4</td> <td>knowledge about Good Hygiene Practices</td> </tr> </tbody> </table>	No.	Element	E1	Apply best practices for cleaning and disinfection procedures and techniques.	E2	Understand the basic knowledge of cleaning and disinfection equipment and its use	E3	Know about Customer Water Storage Tank Types, Basic Design and operation	E4	knowledge about Good Hygiene Practices
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E4	knowledge about Good Hygiene Practices											
5.	QF Emirates level NQA Equivalency Level	<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6 <input type="checkbox"/> 7 <input type="checkbox"/> 8 <input type="checkbox"/> 9 <input type="checkbox"/> 10										
6.	Function	<input type="checkbox"/> Policy and strategy QF 9-10 <input type="checkbox"/> Managing QF 7-8 <input type="checkbox"/> Specifying QF 6-7 <input type="checkbox"/> Controlling QF 6 <input type="checkbox"/> Maintaining capability QF 4-6 <input checked="" type="checkbox"/> Performing/carry out QF 1-4										
7.	Entry qualification	Non										



No.	Field	Details	
	and pre-requisites		
8.	Grading	Application unit: Water tank cleaner Competent/Not Yet Competent	
9.	Industry sector	Water Tank Cleaning/Public Health	
10.	Developed by	Government Entities	Will be added later on
		Private Sector	Water Tanks Cleaning and Maintenance Companies.
11.	Endorsement date		
12.	Frequency of review	Annually	
13.	Version No.	1	
14.	ISCO	ISCO-08 : Unit Group 6221 Aquaculture Workers	



Terms and Definitions

Term	Description
Standard Title	Water Tank Cleaner Occupational Terms
Performance Criteria	are statements that together specify the standard of performance required when carrying out a task
EHS	Environment, Health, and Safety
Personal Protective Equipment (PPE)	Any device, appliance or equipment (including clothing or sunscreen affording protection against the weather) designed to be worn or held by an individual for protection against one or more health and safety hazards, or minimize their exposure to workplace risks. It includes, but is not limited to, items such as facemasks and respirators, eye protection, high visibility clothing, coveralls, goggles, helmets, safety harnesses, gloves and footwear.
Risk	Risk is the product of the measure of the likelihood of occurrence of an undesired event and the potential adverse consequences which this event may have upon people – injury or harm to physical or psychological health. <ul style="list-style-type: none"> Risk = likelihood x Consequences.
Hazard	Any substance, physical effect, or condition with potential to harm people or property.
Equipment	The tools or other items needed for any work activity
Maintenance	Routine checking of the equipment and its components to ensure proper function and safety. This also includes cleaning the equipment and using authorized products and techniques to prevent health hazards
Permit to Work	The system that allows central control and ongoing monitoring of higher risk activities to ensure that activities are: <ul style="list-style-type: none"> authorized; carried out by qualified personnel using appropriate safety precautions; and Those activities with potentially hazardous interactions do not take place at the same time. <p>Activities included in the system should include:</p> <ul style="list-style-type: none"> hot works; confined spaces; electrical work; working at heights; roof access; excavation and trenching; and Energy isolation.
Water Storage	Any receiving Tank after the point of delivery to the customer from the Distribution System for storing water for subsequent use.



Water	Wholesome Water (Drinking Water).
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6. Performance Criteria

Element	1. Apply best practices for cleaning and disinfection procedures And techniques. The Cleaner must be able to:
PC 1.1	Understand and apply all (Safety, Health & Hygiene) requirements in line with OSHAD-SF and section 9.2 of the CoP (Guideline for cleaning and disinfection of accessible customer water storage tanks). issued by RSB (Department of Energy).
PC 1.2	Conduct gas testing inside tanks without entering the tank using gas tester prior to entry/access to tanks, this should be continued at periodic intervals during the cleaning process.
PC 1.3	Understand the hazards and risks associated with the activity and apply proper control measures
PC 1.4	Apply the suitable method for ventilation like Local exhaust ventilation (LEV): <ul style="list-style-type: none"> 1.4.1 Conduct pre-checks on cleaning machines and safe use of electrically operated cleaning equipment's/machinery for tank cleaning 1.4.2 Understand and apply Safe access and egress methods for tank cleaning 1.4.3 Inspect and report defects on cables and safely connect cables to power source used for temporary Electrical lightings inside or outside the tanks
PC 1.5	Use suitable personal protective equipment (PPE) in accordance with manufacturers' specifications and OHS, local and international standards, and company requirements.
PC 1.6	Scrape and scrubs walls, using detergents, solvents, scrapers, and brushes to remove incrustations, scale, or deposits of coke or catalyst. As per section 9.2 of the CoP (Guideline for cleaning and disinfection of accessible customer water storage tanks). issued by RSB (Department of Energy).
PC 1.7	Sweep up debris and shovels sludge into buckets or wheelbarrows or down chutes
PC 1.8	Remove chemical residues and other liquids from tank bottoms with squeegees or pump and suction hoses
PC 1.9	Dry tanks with wood shavings or portable air-drying equipment
PC 1.10	Understand the entry requirements including the following: <ul style="list-style-type: none"> 1.10.1 Ensure tank entry, for inspection and cleaning purposes, is carried out in accordance with operational procedures and guidelines 1.10.2 PTW(Permit-to-work) system, confined spaces, testing requirements, first aid and emergency process, 1.10.3 Use of full PPEs including respirators and ventilators 1.10.4 Obtain full authorization prior to confined space entry



	<p>1.10.5 Understand the isolation process at the entry of tanks to ensure that all incoming entry points are isolated and included in the PTW.</p> <p>1.10.6 Ensure the necessary panel inhibits were activated and recorded.</p> <p>1.10.7 Safe handling and storage of tools and equipments.</p> <p>1.10.8 Inspect own PPE and proper use of suitable PPE.</p> <p>1.10.9 Confirm isolation requirements.</p> <p>1.10.10 Report any health related issues and or including injuries, cuts or abrasions which may get exposed or pose hazard during the cleaning activities.</p> <p>1.10.11 Ensure the necessary panel inhibits were activated and recorded.</p> <p>1.10.12 Use of communication equipments.</p> <p>1.10.13 Use of emergency communication voice or hand signals during an emergency.</p>
PC 1.11	Add approved chemicals to industrial tanks to maintain and replenish tank processing solutions

Element	2. Understand the basic knowledge of cleaning and disinfection equipment and its use; The cleaner must be able to:
PC 2.1	Undertake work in line with the requirements of local safety and health legislation (OSHAD-SF).
PC 2.2	Demonstrate knowledge and awareness of cleaning and disinfecting equipment used in the process of water tank cleaning.
PC 2.3	Demonstrate knowledge and awareness of hazard identification, risk assessment and emergency response requirements.
PC 2.4	Follow the procedure and use the required dilution in accordance with label instructions and be in possession of material safety data sheet (MSDS) for all chemical used.
PC 2.5	Read and follow the product labels and other information such as e.g. user manuals.
PC 2.6	Use equipment correctly in accordance with manufacturer's instructions and have the tools to repair in case of need.
PC 2.7	Apply the chemicals in a way which minimizes and prevents risks to the humans, and the environment in line with the MSDS.
PC 2.8	Take the appropriate action without delay when problems arise during the work and request the supervisor's assistance for clarification as required.
PC 2.9	demonstrate knowledge and adherence to the use of the related equipment to ensure longevity of all the equipment



PC 2.10	Ensure to collect and remove all used equipment, chemicals and dispose waste in accordance with work order and environmental, legislative, OHS and company requirements
PC 2.11	If necessary, clearly inform the customer about location of materials and equipment left on site for continuing treatment and monitoring purposes and any relevant handling and safety instructions. Give emergency phone number of the company for attending any immediate customer services.
PC 2.12	Control those health and safety risks with the job responsibility.
PC 2.13	Eliminate hazards prior to handover in accordance with environmental, legislative, OHS and company requirements
PC 2.14	Clean and decontaminate equipment in accordance with manufacturers' specifications and environmental, OHS and company requirements
PC 2.15	Dispose of all collected waste in accordance with work order and manufacturers' specifications and environmental, legislative, OHS and company requirements

Element	3. Know about Customer Water Storage Tank Types, Basic Design and operation The cleaner must be able to:
PC 3.1	Demonstrate the knowledge and awareness of the different type of available customer water tank storage types
PC 3.2	Demonstrate vivid evidence of the basic designs as well as how they each operate
PC 3.3	Pre-plan washing and tank entry activities to enable co-ordination and integration to take place with ongoing cargo and marine operations
PC 3.4	Maintain effective communication with supervisor/operators
PC 3.5	Ensure tank cleaning operations are completed in accordance with tank entry requirements

Element	4. Strong knowledge about Good Health, Safety and Hygiene Practices, and Chemical Hazard The cleaner must be able to:
PC 4.1	Make sure that he has information on health, hygiene, safety and security procedures that apply to your area of responsibility
PC 4.2	Monitor area of responsibility for hazards and risks to health, hygiene, safety and security
PC 4.3	Record or report risks and any health, hygiene, safety or security action that you have taken according to your organisational procedures
PC 4.4	Pass on information relating to how procedures are working and how they can be improved with regards to identified health, hygiene, safety and security risks
PC 4.5	Make sure behaviour does not endanger the health and safety of others during the work
PC 4.6	Knowledge on incident reporting to Supervisor



7-Knowledge and understanding

1. Best Practices for cleaning and disinfection procedures and techniques

- K1.** How to identify hazards, assess risks and implement proper control measures
- K2.** How to respond to an emergency situation.
- K3.** How to, use and care for PPE (e.g. sight/hearing protection, gloves, footwear, hard hats, respirators, permit to work procedures, lock out tag out procedures, and confined space identification and procedures)
- K4.** How to interpret operational requirements (e.g. policies, procedures, instructions, codes of practice, standards, and schedules)
- K5.** When and how to transfer product
- K6.** How to interpret information on vapour removal targets
- K7.** The range of de-gassing techniques available (e.g. convection, steam evaporation, flushing with gas, flushing with water) and how to apply them
- K8.** How and why to use neutralising agents
- K9.** How to minimise contact during residue transfer
- K10.** Safe lifting and moving techniques
- K11.** The information required on the containers
- K12.** Disposal requirements and locations
- K13.** How to work with and within the permit system
- K14.** How to ensure that the tools and equipment are fit for purpose
- K15.** The importance of secure isolation
- K16.** The safety requirements specific to work in confined spaces (e.g. Confined Spaces Regulations)
- K17.** The range of available approved cleaning agents and techniques
- K18.** How to identify signs of tank damage and distress (e.g. debris, surface corrosion, lining damage, cracking)
- K19.** The information to communicate (e.g. written, verbal, etc) and to whom
- K20.** Understand the basic knowledge of cleaning and disinfection and the difference between them.



2. Customer Water Storage Tank Types, Basic Design and operation

- K1** .The procedures necessary to obtain full authorization prior to enclosed space entry
- K2**. How to confirm isolation requirements necessary
- K3**. How the necessary panel inhibits are activated, ensured and recorded
- K4**. The operational procedures and guidelines necessary to ensure tank entry for inspection and maintenance is carried out safely
- K5** .How to establish that inspection and maintenance activities meet requirements
- K6**. How to safely and effectively deal with emergency situations
- K7**. How to confirm the removal of isolations on completion of operations
- K8**. How to ensure the necessary panel inhibits have been de-activated
- K9**. How to clearly and accurately update the log keeping records
- K10**. How to use and care for PPE (to include sight/hearing protection, gloves, footwear, hard hats, respirators)
- K11**. How to interpret operational requirements (e.g. relevant policies, procedures, instructions, codes of practice, standards and schedules)
- K12**. Know the layout if available and emergency exit.
- K13**. How to establish/maintain effective fixed/mobile communications with relevant internal/external personnel (e.g. supervisor, other operators, supply vessels)
- K14** .The permit to work system

3. Good Safety, Health and Hygiene Practices

- K1**. The cleaner must know his responsibilities for health, hygiene, safety, and security
- K2**. The main areas of health, hygiene, safety law and regulations that affect the work for the area of responsibility.
- K3**. The statutory authorities that enforce these health, hygiene, and safety laws and regulations
- K4**. Organisation's health, hygiene, safety and security procedures that are relevant to your work
- K5**. The implications of breaking the law on health, hygiene and safety both for you and your organisation
- K6**. The person who is responsible for first aid, health, hygiene, safety and security in your organisation and their responsibilities
- K7**. How to communicate with colleagues on issues to dealing with health, hygiene, safety, and security



- K8.** The types of information about health, hygiene, safety and security that you should record and store
- K9.** The procedures you should follow to record and store information about health, hygiene, safety and security
- K10.** Other people and organisations that need to have access to your information about health, hygiene, safety and security
- K11.** The procedures you should follow to make recommendations about health, hygiene, safety and security and to whom you should make them, including incident reporting.
- K12.** Organisation's emergency procedures
- K13.** How to identify report or deal with faults with the equipment that the cleaner are responsible for
- K14.** The limits of the cleaner authority when directly dealing with risks and hazards - what should done by the cleaner and what shall be reported.
- K15.** How to monitor the area of responsibility to make sure the cleaner maintain the health, hygiene, safety and security of employees, customers and other members of the public
- K16.** How frequently the cleaner should carry out health, hygiene, safety and security inspections
- K17.** The typical health, hygiene, safety and security hazards that exist, or may exist, in the area of responsibility
- K18.** How to identify and assess the risks associated with these hazards
- K19.** How to eliminate or minimise the risk associated with typical health, hygiene, safety and security hazards
- K20.** What to do in the event of an emergency (Eg: Fire)



8. Other Skills

1. Behaviours Required

The cleaner must demonstrate the following:

1. Respond quickly to crisis and problems with a proposed course of action
2. Identify people's information needs
3. makes appropriate information and knowledge available promptly to those who need it and have a right to it
4. is vigilant for possible risks and hazards
5. Take personal responsibility for making things happen
6. Identify the implications or consequences of a situation
7. Act within the limits of your authority
8. Constantly seeks to improve performance

2. Reading and Writing Skills

➤ **The cleaner must be able to:**

1. Read the basic information about the used chemicals and treatment carried out and follow-ups.
2. Read the "before during and after treatment" precautions to be followed by the customer and recommendation given by the supervisor with respect to the overall process to service, proofing and hygiene
3. Read any specific safety related guideline
4. Able to Record and document the basic information of the cleaning performed (if required).
5. Record all observations done by supervisor as per the checklist provided
6. Write in at least one language (English/Arabic)
7. Complete written work with attention to detail.

3. Listening & Speaking Skills

➤ **The cleaner must be able to:**

1. Clearly communicate workplace information and ideas with colleagues (verbal and non- verbal)
2. Communicate with colleagues and customers to handle verbal enquiries, such as clarifying treatment (English/Arabic)
3. Communicate to the supervisor, the report of the performed work
4. Interact with the customer through Service supervisor on safety measures



References

- Abu Dhabi Occupational Safety and Health System Framework(OSHAD-SF www.oshad.ae)
OSHAD SF relevant codes of practice
- HAAD first aid standard Ref: PHR/HRM/FA/0.9 - Issue date: December 2010 Titled: HAAD Standard for First Aid Training
<http://www.haad.ae/HAAD/LinkClick.aspx?fileticket=nXODdVAzzuo%3D&tabid=819>
- Code of Practice for the inspection and cleaning of customers storage tanks- issued by Regulation & Supervision Bureau (DoE) /January 2015
- <http://nos.ukces.org.uk/Pages/index.aspx>
- <http://nos.ukces.org.uk/Pages/index.aspx>