

National Manual for Assets and Facilities Management Volume 10, Chapter 3

Drinking Water Procedure

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Drinking Water Procedure

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Drinking Water Procedure

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Drinking Water Procedure

Table of Contents

1.0	PURPOSE	5
2.0	SCOPE	5
3.0	DEFINITIONS	5
4.0	REFERENCES	5
5.0	RESPONSIBILITIES	5
5.1	Facility / Contract Manager	5
5.2	Supervisor	5
5.3	HSE Representative	5
5.4	Personnel	6
6.0	PROCEDURE.....	6
6.1	General Requirements	6
6.2	Drinking Water Supply and Distribution	6
6.3	Disposable Cups or Bottles	6
6.4	Filling Coolers.....	6
6.5	Cleaning and Disinfecting Coolers - General	7
6.5.1	Cleaning	7
6.5.2	Disinfecting	7
6.5.3	Storing Drinking Water Coolers.....	7
6.6	Ice Machines - General	7
6.6.1	Exterior Cleaning.....	8
6.6.2	Interior Cleaning and Sanitizing	8
6.6.3	Air-cooled Condenser Cleaning	8
6.6.4	Filter Cartridge.....	8
6.6.5	Block Ice Storage Machines.....	8



Drinking Water Procedure

1.0 PURPOSE

Safe potable drinking water should be provided in all sectors throughout Operations and Maintenance. Due to the build-up of bacteria, dust, dirt, and other unwanted conditions, some general requirements need to be implemented. Because of this, it is necessary for Entities, and/or their contractors, to implement a procedure to provide safe water, and to control hazardous elements, such as biohazards, associated with water delivery methods.

2.0 SCOPE

The scope of this procedure is to provide means to the user to create a custom procedure outlining and detailing the requirements and responsibilities to associated with providing safe potable water. This procedure applies throughout the Kingdom of Saudi Arabia to Operations and Maintenance functions and activities on, in, and around government owned facilities and projects.

3.0 DEFINITIONS

Definitions	Description
Cooler	A cooler is defined as a portable container equipped with a faucet, capable of being tightly closed, also designed, constructed, and serviced so that sanitary conditions are maintained.
HSE	Health Safety and Environment
Potable	A liquid, such as water, that is suitable for drinking
PPE	Personal Protective Equipment
PSIG	Pounds per square inch gauge (psig), indicating that the pressure is relative to atmospheric pressure.

4.0 REFERENCES

- OSHA 29 CFR 1910.141 Sanitation
- OSHA 29 CFR 1926.51 Sanitation
- EOM-KSH-PR-000006 Labor Accommodation Sanitation and Hygiene Procedure.
- EOM-KSH-PR-000002 Occupational Health and Industrial Hygiene Procedure
- EOM-KSS-PR-000001 A&FM General Safe Working Requirements Procedure
- EOM-KSS-PR-000003 Personal Protective Equipment Procedure.

5.0 RESPONSIBILITIES

5.1 Facility / Contract Manager

- Overall responsibility for this procedure and for supporting this and verifying entities participate.
- Providing the personnel, facilities, and other resources necessary to accomplish this procedure.

5.2 Supervisor

- Providing the resources to implement the requirements of this procedure.
- Communicating with management concerning Health Safety and Environment (HSE) expectations concerning project drinking water delivery and dispensing practices.
- Providing leadership regarding and expectations for HSE requirements.

5.3 HSE Representative

- Auditing this process.
- Confirming that this procedure meets the local government requirements and regulations.



Drinking Water Procedure

5.4 Personnel

- Knowing, understanding, and complying with the Environmental Safety and Health requirements of this Procedure that apply to the work they perform.
- Requesting additional information and further clarification, before starting work, if personnel receive assignments they do not understand.

6.0 PROCEDURE

6.1 General Requirements

During job planning, consideration shall be given to the provision of drinking water for employees and others associated with the tasks to be performed, with respect to working in extreme conditions, prevailing weather conditions, or remote locations. Hygiene and sensitization practices are an important aspect when providing drinking water. Water should come from a water provider authorized by the governing Saudi national body/municipality.

Personnel handling the cleaning, filling and distribution of drinking water must be trained, and should be subject to pre-deployment medical clearance and periodic health checks thereafter. It is recommended for facilities/contractors to conduct periodic audits on their suppliers to ensure compliance with the hygiene practices and processes. Coolers for potable water should only be used for drinking water. Coolers shall be labelled with the words "Drinking Water."

6.2 Drinking Water Supply and Distribution

- Only potable water will be used for drinking water.
- Only approved potable water systems shall be used to distribute drinking water.
- Drinking water should be tested monthly, or in accordance to local requirements, for water quality.
 - Valid records of the certification must be maintained.
- In the event of an interruption in the water supply distribution system due to a broken line, perform a water quality test before the line is returned to service.
 - Contact HSE Representative for test and results.

6.3 Disposable Cups or Bottles

Where water dispensers or coolers are available, arrangements shall be made to provide disposable paper cone cups or personal reusable cups. Special considerations shall be given to those working in remote locations, conditions, etc. Use of a "community cup/glass" (i.e., only one cup/glass for use by all employees) is prohibited.

6.4 Filling Coolers

The following requirements pertain to the use of coolers:

- Fill coolers directly from the potable water spigot or a hygienically clean hose system.
- Observe the following precautions when filling coolers:
 - Clean and disinfect utensils used to fill coolers just as coolers are cleaned and disinfected.
 - Practice proper personal hygiene always when handling drinking water and ice.
 - Use PPE (latex gloves and a rubber apron) when handling, filling with ice, and filling with water. Wear foot protection when using block ice.
 - Use only cleaned and disinfected coolers.
 - Rinse outside of coolers before opening lid.
 - Place ice in cooler (seasonal) and replace lid.
 - Place cooler on back of truck.
 - Wash down truck bed before placing coolers on truck bed.



Drinking Water Procedure

- Remove lid and fill cooler with potable water individually using an approved water hose.
 - It is recommended to use tamper-proof tape over the container lid once filled.
- Always keep coolers off the ground.
- Place the cooler away from toilets, trash collection areas and work activities that creates dust.
- Proper drainage measures must be taken to prevent excess/spilled water from accumulating.
- When using bottled drinking water dispenser, only bottles that are sealed by the manufacturer must be mounted on the cooler. Bottles should not be refilled except by the manufacturer.

6.5 Cleaning and Disinfecting Coolers - General

6.5.1 Cleaning

- Truck beds used for transportation must always be clean.
- Coolers must be stored off the ground, lids must be kept closed when being stored.
- Clean and disinfect coolers used to dispense drinking water at least every 2 days
- Clean and disinfect coolers used to dispense electrolyte mix every day.
- Clean and disinfect utensils used for mixing, filling, and cleaning every day.
 - Store utensils used for mixing and filling in a closed container when not in use.
- While cleaning and disinfecting, use PPE consisting of safety goggles, rubber apron, and latex gloves.
- Use a mild biodegradable soap and water mixture as a cleaning solution.
- Scrub outer surfaces of the cooler with a brush and wipe with a clean sponge. Disinfect the sponge and brush daily.

6.5.2 Disinfecting

- Remove cooler spigot from the cooler and scrub with a toothbrush and bottlebrush using disinfecting solution.
- Make the disinfecting solution daily before usage. This solution will be two-thirds cup of bleach to 3.8lt of potable water.
- Pour 1.9lt of disinfecting solution into the cooler to be disinfected.
- Cover cooler tightly and shake it so that the solution contacts the entire inside surface.
- Let stand for 30 seconds.
- Scrub the inner surfaces of the cooler with a brush.
- Rinse empty cooler once.
- Then add 59ml of baking soda to the inside of the cooler with 1.9lt of potable water.
- Cover cooler tightly and shake it so that solution contacts the entire inside surface.
- Rinse cooler thoroughly (2 or 3 times) with potable water.
- Air dry.

6.5.3 Storing Drinking Water Coolers

Observe the following precautions when storing drinking water coolers:

- Keep coolers off the ground while in storage.
- Store coolers not in use with lids in place.
- Store coolers that have been cleaned and disinfected away from dirty or in-use coolers, AND labeled "Clean".
- Prior to using, re-clean and disinfect any coolers that have been in storage for more than 7 days.

6.6 Ice Machines - General

- Remove ice from machine with an ice scoop only.
- Keep doors locked when not in use or unattended.
- Coolers should be cleaned every 6 months, refer to the manufacturer recommendation in the service manual.



Drinking Water Procedure

6.6.1 Exterior Cleaning

- Use cleaning sponge with mild biodegradable soap solution to remove any dirt or dust from the outside of the machine.
- Wipe dry with a clean cloth.
- Keep the area around the ice machine clean and free of standing water.

6.6.2 Interior Cleaning and Sanitizing

- Clean and sanitize ice machine every 6 months (minimum).
- Follow the manufacturer's recommendations in the service manual for cleaning and sanitizing.

6.6.3 Air-cooled Condenser Cleaning

- Clean the condenser every 6 months.

6.6.4 Filter Cartridge

- Replace the primary filter cartridge every 2 months (minimum).
- A reading of below 20 psig on the filter gauge indicates when replacement is necessary.

6.6.5 Block Ice Storage Machines

- Use cleaning sponge with a mild biodegradable soap solution to remove any dirt or dust from the outside of the machine.
- Wipe dry with a clean cloth.
- Keep the area around the block ice storage machine clean and free of standing water.
- Clean and sanitize block ice storage machine every 2 months (minimum).
- Follow the manufacturer's recommendations in the service manual for cleaning and sanitizing.