



شركة العين للتوزيع
Al Ain Distribution Company

**Health, Safety and Environment
Management System
Procedure**

**Standard Operating Procedure
Working / Cleaning in Reservoirs
& Tanks
SOP.HSEMS.21**

Effective Date 10 / 01 / 2019

Procedure #: SOP.HSEMS.21

Issue : 1

Revision : 0

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Approved by:

Managing Director




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Al Ain Distribution Company

**Standard Operating Procedure
Working or Cleaning of Water Reservoirs or Storage
Tanks**

Prepared by:

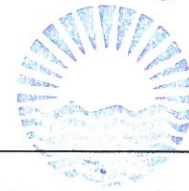

Senior Health, Safety and Environment Engineer

Reviewed by:


Health, Safety and Environment Department Manager

Approved by:


Managing Director



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Al Ain Distribution Company

Issued by:


HSE Management System Representative

Effective Date: 10 / 01 / 2019

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1. INTENT

- 1.1 This Standard Operating Procedure (SOP) defines the general rules and good practices required for when working in or cleaning reservoirs.
- 1.2 This SOP is a supplement to the AADC JSAs.
- 1.3 Working in reservoirs and tanks is regarded as a high risk activity and should only be undertaken when adhering to this SOP.

2. PRINCIPLES

- 2.1 Working in reservoirs and tanks is regarded as a high risk activity and could be considered as working in a confined space.
- 2.2 When this activity is classified as working in confined space then the Confined Spaces SOP must be used in parallel with this one.

3. DEFINITIONS

Term	Definition
SOP	Standard Operating Procedure
JSA	Job Safety Analysis
LOTO	Lock-out Tag-out
RA	Risk Assessment
EHS	Environment, Health & Safety

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4. RESPONSIBILITIES

The EHS Manager is responsible to distribute this procedure to all involved parties and monitor the implementation. Added responsibilities:

Role	Working in Reservoirs / Water Storage Tanks
Supervisor	<ul style="list-style-type: none">• Coordinates and plans the working in reservoir or water storage tank• Conducts the onsite risk assessment when required but always for working in confined spaces• Ensures that workers are trained to perform the work as required
Workers	<ul style="list-style-type: none">• Ensures they are aware of the risks of the task• Work in accordance with the supervisor's instruction and guidance

5. PROCEDURE

5.1 Planning

- 5.1.1 Conduct a risk assessment on the activity when required but always for working in confined spaces and follow the requirements of that SOP.
- 5.1.2 Consider the dimensions of the water reservoir / tank.
- 5.1.3 Be aware of the contents of the reservoir / tank is it raw (bore holed) or treated water.
- 5.1.4 Treated water will always have added chemicals and empty reservoirs / tanks will be required to be vented / aired.
- 5.1.5 Ventilation and / or extractions should be considered when required.
- 5.1.6 Isolation valve(s) are to be closed and LOTO applied.
- 5.1.7 Lighting is to be provided as required when natural lighting levels are too low.
- 5.1.8 Low voltage lights and other electrical equipment should be considered when required.
- 5.1.9 Ensure that the required tools and equipment are available for use.
- 5.1.10 Consider methods for removing of sediment – will lifting activities be required?
- 5.1.11 Refer to JSAs Reservoir Cleaning and Confined Spaces.

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- 5.1.12 Ensure all workers are medically fit to conduct work in confined spaces.
- 5.1.13 Ensure gas detectors and other testing equipments are available at site.
- 5.1.14 Assess and Ensure the requirements of Scaffoldings

Criteria for Disqualifying Persons Working in Reservoirs

- Workers who are not medically fit to work in restricted areas;
- Workers who are not able to enter and exit via reservoir / tank openings.'

- 5.1.15 Contractors have a responsibility to working safely on the AADC water and treated sewerage networks.

Contractors

- Must include risk assessments and method statement for working in reservoirs or tanks;
- Must be competent to perform the work activities required.

5.2 Working in Reservoirs or Storage Tanks

Required PPE:

Safety helmet;

Overalls;

Gum boots;

Gloves;

Safety Specs (when required).

Gas masks

- 5.2.1 Ensure inlet valve(s) is in the closed position and drain valve(s) is in the open position and all are LOTO.
- 5.2.2 Ensure that confined space requirements are adhered to if the reservoir or tanks

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is deemed a confined space. Permit shall be issued if required.

- 5.2.3 Ensure JSA/SOP relevant to Working at Heights & Scaffolding are adhered as required.
- 5.2.4 All work in reservoirs or storage tanks must be conducted under constant supervision.
- 5.2.5 Inspect Expansion Joints for their Integrity.
- 5.2.6 Remove accumulated sediment from the base and sides of the reservoir or tank.
- 5.2.7 All sediment must be taken out of the reservoir or storage tank using suitable means.
- 5.2.8 Sides and base of the reservoir / storage tank are to be scrubbed / swept clean.
- 5.2.9 Once cleaning activities are completed and sediment and tools have been removed the reservoir or tanks must be suitable disinfected.
- 5.2.10 Replace Filling Material for the Expansion Joints (To be supplied from ADWEA approved vendor with Non-Toxic Certificate)
- 5.2.11 No persons are to be in the reservoir or tank during the disinfection period.
- 5.2.12 Flush the reservoir or tank after the required disinfection period and test the sample for the chlorine level. Flush the tanks till the Residual Chlorine is reached less than 0.5 mg/Litre.
- 5.2.13 Close drain valve and open inlet valve accordingly and bring the reservoir or tank on-line.

6. REFERENCES

- 6.1 OSHAD SF Element 2 – Risk Management – Version 3.0, March 2016

7. RECORDS (when required)

7.1 Scaffolding Record (as required)

7.2 LOTO Record

7.3 Permit to Work

7.4 Non- Toxic Certificate for Expansion Joints

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