



شركة العين للتوزيع
Al Ain Distribution Company

Health, Safety and Environment Management System Procedure

Standard Operating Procedure Working on Pipelines SOP.HSEMS.22

Effective Date 10 / 01 / 2019

Procedure #: SOP.HSEMS.22

Issue : 1

Revision : 0

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Approved by:

Managing Director



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Standard Operating Procedure Working on Pipelines

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Reviewed by:


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Approved by:


Managing Director

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 either pressurised or de-pressurised on pipelines.
- 1.2 This SOP is a supplement to the AADC SSR and JSAs.
- 1.3 Working on pipelines is regarded as a high risk activity and should only be undertaken when adhering to this SOP.

2. PRINCIPLES

- 2.1 Working on pipelines is regarded as a high risk activity.
- 2.2 Working on pipelines under pressure shall only be done when, due to operational requirements, it is not possible to isolate and drain the line.

3. DEFINITIONS

Term	Definition
SOP	Standard Operating Procedure
JSA	Job Safety Analysis
HDPE Pipe	High Density Polyethylene Pipe
LOTO	Lock-out Tag-out
RA	Risk Assessment
SSR	System Safety Rules

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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 on Pipelines
Supervisor	<ul style="list-style-type: none"> Coordinates and plans the working on pressurised and de-pressurised pipelines Conduct the onsite risk assessment when required but always for work on pressurised pipelines Ensures that workers are trained to work on pressurised or de-pressurised pipelines
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 on pressurized pipelines.

5.1.2 Consider these Hierarchy of Controls when conducting the RA, these are:



<ul style="list-style-type: none"> Is working on pressurized pipelines the only option? Is it possible to conduct the work on pressurized pipeline in a safe manner i.e. isolated and drained? 	<ul style="list-style-type: none"> Conduct risk assessment What equipment is required for the task What work limit systems such as pressure limits Workers trained for the job? 	<ul style="list-style-type: none"> Competent operatives Supervision <p style="text-align: center; color: blue; font-weight: bold; font-size: 1.2em;">CONTROLLED</p>
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- Required PPE available?

- 5.1.3 Consider whether excavation is required and if so the type and depth of such excavation.
- 5.1.4 Consider excavation safe practices such as sloping of slides and shoring when required.
- 5.1.5 Refer to JSA and SOP for excavations.
- 5.1.6 Ensure all workers are medically fit to conduct work in confined spaces.

Criteria for Disqualifying Persons Working on Pressurised Pipelines

- When there is a risk of the pressurized pipeline rupturing during working activities;
- When there is a possibility of pressure increasing in the pipeline during

- 5.1.7 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 on pipelines;
- Must be competent to perform the work activities required;

5.2 Working on Pressurised Pipelines

Required PPE:

Safety helmet;

Overalls;

Safety shoes/boots;

High visibility vest;

Gloves.

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- 5.2.1 All work on pressurised pipelines must be conducted under constant



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supervision.

- 5.2.2 Consider decreasing pressure in the line whenever possible i.e. stem the flow by regulating the flow or open drain valves on the pipeline when possible.
- 5.2.3 Identify the nearest possible isolation and drain valves on the pipeline to be worked on in case of an emergency that these can be accessed.
- 5.2.4 Identify the nearest pump station which is feeding the line to be worked on and ensure that contact can be made with the operator in case of an emergency.
- 5.2.5 Prevent exposure of leaked water onto electrical systems.
- 5.2.6 Work on flanges should be carried out adopting the "down and away" (out of the line of fire). If excessive leak occurs - be prepared to re-tighten nuts and bolts of the flange.
- 5.2.7 Tapping into HDPE High Density Polyethylene pipeline under pressure shall only be conducted by competent operatives using the approved taping equipment.
- 5.2.8 Using of tapping equipment shall be done in accordance to suppliers operating instructions and safety considerations.
- 5.2.9 Should an uncontrolled release of pressure / water occur on a line then the nearest valve must be isolated and further work can only take place once the line is depressurised.

5.3 Working on De-pressurised Pipelines

Required PPE:

Safety helmet;

Overalls;

Safety shoes/Rubber boots;

High visibility vest;

Gloves,

- 5.3.1 Ensure that all affected customers are notified on intended supply disruption including the duration of shutdown.
- 5.3.2 Minimise the effect of the shutdown – limit section of pipeline to be isolated.
- 5.3.3 Consider traffic control measures, barricading and warning signs when required.

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- 5.3.4 Determine which section(s) of the pipeline is to be worked on and also identify which valves will be operated.
- 5.3.5 Disconnect, isolate and LOTO the section of pipeline to be worked on from the rest of the network.
- 5.3.6 Close the valves slowly to prevent water hammer.
- 5.3.7 Open the drain valve on the isolated section of the line or fire hydrant in order to drain / depressurise the pipeline.
- 5.3.8 Ensure water from drainage or from the fire hydrant are directed away from general public and / or traffic.
- 5.3.9 Ensure that water can flow into a storm water system.
- 5.3.10 If no suitable storm water system is available select an area that can accommodate drained water.

6. REFERENCES

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

7. RECORDS (when required)

- 7.1 Permit to Work
- 7.2 Excavation Permit
- 7.3 Method Statement from the Contractor (as applicable)

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