

Standard Operating Procedure Working on Pipelines SOP.HSEMS.22

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# Standard Operating Procedure Working on Pipelines

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Effective Date: 10 / 01 / 2019





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<b>Working on Pipelines</b>	
SOP.HSEMS.22	

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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	W





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## 4. RESPONSIBILITES

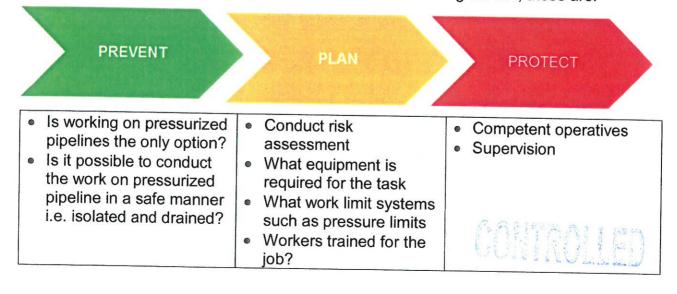
The EHS Manager is responsible to distribute this procedure to all involved parties and monitor the implementation. Added responsibilities:

Role	Working on Pipelines
Supervisor	<ul> <li>Coordinates and plans the working on pressurised and de-pressurised pipelines</li> </ul>
	<ul> <li>Conduct the onsite risk assessment when required but always for work on pressurised pipelines</li> </ul>
	<ul> <li>Ensures that workers are trained to work on pressurised or de-pressurised pipelines</li> </ul>
Workers	<ul> <li>Ensures they are aware of the risks of the task</li> <li>Work in accordance with the supervisor's instruction</li> </ul>
	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:





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<ul><li>Required PPE available?</li></ul>	

- 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 raupturing 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.

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)

