Safe Work Instruction - Bamarang WTP Backwash P/S Draindown Procedure for removal of Valves, Refluxes & Pumps

DO NOT use this plant* or complete this task unless you have been inducted in its safe use and operation by an Authorised Experienced Operator

This SWI may not cover all possible hazards and risks and should be referred to as a control measure in the risk assessment process. Additional training may be required for high-risk plant. Site and task may change required PPE.

PERSONAL PROTECTIVE EQUIPMENT


Eye protection must be worn


Long and loose hair must be contained or covered.


Hearing protection must be worn


Foot protection must be worn


Hand protection must be worn


High visibility clothing must worn


Head protection must be worn

POTENTIAL HAZARDS AND RISKS

Entanglement
Entanglement in moving parts

Struck by Moving Object
Struck by moving object due to work pieces being ejected

Exposure to High Pressure Fluid
Injury from exposure to high pressure fluids

Slip, Trips, Falls
Slip, trip, fall due to uneven or slippery work surfaces

Manual Task Injury
Manual task injury from incorrect manual handling techniques

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Complete WorxOnline site-specific risk assessment
- ✓ Complete the appropriate pre-operational plant checklist if applicable
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Ensure that guards are fitted, secured and functional in accordance with manufacturers guidelines
- ✓ Reference P28 Energy Isolation Procedure for isolation of all areas relating to the task

DRAINDOWN PROCEDURE

- ✓ WTP Operator to switch Filter controls to Manual (Ensuring all headloss levels are low, backwash maybe required prior to the shutdown)
- ✓ Drain down one Filter and Isolate prior to work commencing
- ✓ Electrically isolate motors – Lock/Tag out
- ✓ Close 5ML outlet valve
- ✓ Close 5ML upstream/suction valves on Backwash pumps (closest to reservoir) – Lock/Tag out
- ✓ Close downstream/discharge valves on Backwash pumps if working on Reflux or Pumps – Lock/Tag out

Note: If working on downstream/discharge butterfly valves see Procedure 2

- ✓ Close Backwash ROFC valve
- ✓ Drain by dismantling flange – Proceed with works

CHARGING/FILLING PROCEDURE

- ✓ After works completed and flanges secured/tightened, remove Lock/Tag out devices and open 5ML Reservoir outlet to Backwash pumps valve and upstream/suction valves. Bleed air from relief valve on top of pumps
- ✓ Remove Lock/Tag out devices and open downstream/discharge valves
- ✓ Remove Lock/Tag out devices from motors, re-establish electrical circuit and test Backwash pumps into the lowered Filter.
- ✓ Air can also be bled from top of Backwash pipework in Filter Gallery.

PROCEDURE 2

- ✓ When working on the downstream/discharge butterfly valves in the Backwash P/S, the main backwash valve (in the Filter Gallery) needs to be closed and Lock/Tagged out and air isolated also.
- ✓ The water head above this valve also needs to be drained. This can be done via release into the Filter outlet pipework
- ✓ To drain the remaining water in the pipework between the WTP and the Backwash P/S, the dismantling joint/flange is to be loosened releasing this water

- ✓ If air locking occurs, the Operator may have to open ROFCV and introduce air to release vacuum. The Operator is to liaise with all relevant staff and the P/S is to be vacated prior to this occurring.

Note: Cover all electrical components in P/S to prevent water access during scheduled work.

- ✓ Additional pumps will be needed to remove this water from its catchment location
- ✓ After works completed return to Charging/Filling Procedure

DO NOT

- × Do not proceed until all Isolations are in place and checked by the Operator or Supervisor
- × Do not operate plant if faulty. Attach an Out of Service tag and report fault to your Supervisor.
- × Do not use mobile phone while operating plant

***Plant in this SWI refers to any machinery, equipment, appliance, container, implement and tool.**