

Safe Work Instruction - Replenishing the Sodium Hydroxide (Caustic) and Polyaluminium Chlorhydrate (PACAC or ALCHLOR AC) Storage Tanks at Bendeela WTP

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.



P2 face mask must be worn when airborne dust or fumes are created



Foot protection must be worn



Hand protection must be worn



Protective body clothing must be worn



High visibility clothing must worn

POTENTIAL HAZARDS AND RISKS

- Manual Task Injury**
Manual task injury from incorrect manual handling techniques
- Chemicals**
Burn injury
Exposure to hazardous chemicals
Exposure to toxic fumes
Irritation to skin
- Other**
Injury due to plant malfunction or misuse
- Electrical Shock or Burn**
Electrical shock or burn from damaged or poorly maintained electrical leads and cables
- Slip, Trips, Falls**
Slip, trip, fall due to uneven or slippery work surfaces
Slip, trip, fall due to steep working surfaces

PRE-OPERATIONAL SAFETY CHECKS

- ✓ **WARNING: While Caustic is considered a hazardous substance and may be a dangerous goods, PACAC is considered non-hazardous; however, both should be treated with the same respect. Before carrying out the following procedure the worker is to be familiar with the relevant SDS and follow all safety precautions listed on the data sheet prior to handling the chemical**
- ✓ Complete site-specific risk assessment
- ✓ Complete visual plant check prior to operation
- ✓ Ensure you are familiar with plant operations and controls
- ✓ Ensure that guards are fitted, secured and functional in accordance with manufacturers guidelines
- ✓ Before commencing the transfer process for the CAUSTIC/PACAC chemicals, the operator must ensure the safety shower and eye wash facilities are in working order. Worker must also be familiar with their operations
- ✓ Prior to commencing the transfer process the operator must ensure the drum pump, extension lead & portable residual current device (RCD) have

had a safety inspection, testing & tagging procedure completed for that month's use

OPERATING PROCEDURES

- ✓ Keep clear of moving plant parts
- ✓ Operate plant to the conditions of the work area
- ✓ Manoeuvre the vehicle carrying the 200 litre drums of chemical as close as possible to the chemical stores
- ✓ Remove the lid on the chemical tank
- ✓ Chemical level should be checked with all dosing pumps turned off to determine accurate tank volume
- ✓ Remove the drum cap and place the drum pump stem into the chemical ready to transfer the drum contents into the storage tank
- ✓ Place the drum pump discharge hose into the storage tank and secure accordingly to prevent leakage to external environment
- ✓ Connect the drum pump lead via an extension lead & RCD to the nearest GPO
- ✓ Switch on the power at the GPO and pump head to commence the transfer process
- ✓ Run the pump until the drum is empty
- ✓ Turn the pump off at the GPO and pump head

- ✓ Carefully lift the pump to allow the chemical to drain back to the drum before removing the pump from the drum. Decant remaining volume in 200L drum to bucket, then add bucket contents to bulk storage vessel manually
- ✓ Repeat the above steps for any further drums
- ✓ Replace tank lid and drum caps

ENDING OPERATIONS

- ✓ Thoroughly wash and flush drum pump
- ✓ Thoroughly hose down any spillage
- ✓ Remove, clean and store PPE
- ✓ Record litres of CAUSTIC/PACAC added to the storage tank

DO NOT

- ✗ Do not use if plant is faulty. Attach an Out of Service tag and report fault to your supervisor
- ✗ Do not leave plant running unattended
- ✗ Do not leave keys in machinery whilst unattended
- ✗ Do not wear loose jewellery
- ✗ Do not use mobile phone while operating plant

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