



Document Owner: Manager Customer Planning

Auto Shut-Off Valve - Planned Maintenance

Planned maintenance procedures for maintenance and testing of automatic shut-off valves (ASV). Include auto-shut-off valves at Pump Stations and distribution network auto-shut-off valves.





Escalate if extra resources required or problems occur!

- Escalate to Team Leader and inform of the issues faced and/or expected resources required if necessary.

Required Skills, Competencies (Qualifications and/or Certifications)

Competent persons only.





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Standard Operating Procedure

Required Equipment

Equipment and Information	Details			
Fully Equipped Vehicle	Ensure vehicle, plant, equipment and materials appropriate to the day's work schedule is			
	available.			
Specialist Equipment	Ensure specialist equipment required is available for utilisation.			
	- Fully charged mobile			
	(To receive SMS messages triggered by auto shut-off valve testing).			
	- Fully charged multimeter			
Specialist Materials & Parts	rials & Parts Ensure you have loaded up all the required parts and materials required to undertake the			
	maintenance work to be completed.			
PPE	Ensure appropriate PPE required is available for utilisation.			

Prepare to do the work

Action	Action Details		
Pre Start Process	Complete the Daily Pre Start - Planned Maintenance		
	- Include Hazard ID		
	- Include Pre-Start Tailgate Meeting		
	Undertake all tasks required in the Generic Planned Maintenance SOP.		
Compliance	Traffic Management Plan - Where required, TMP to be in place prior to work starting. TMP		
	to be accessible on site.		
Liaison Plant Staff	If required advise Plant Operations staff prior to starting, "Site power will be switched to		
	battery for duration of exercise and include timeframes Start time: ##:## End Time: ##:##".		

Perform the work @ 52 Weeks

Period (Weeks)	Action	Trade	Action Details
52	Inspect	Electrician	Inspect ASV Visually check valve actuator mechanical and electrical condition. Carry out basic remediation of issues and generate new work order for significant works
52	Inspect	Electrician	Inspect ASV chamber Visually check manhole condition. Carry out basic remediation of issues and generate new work order for significant works
52	Inspect	Electrician	Inspect ASV control panel Check the ASV panel condition and all indicator lights are working. Check condition of electrical control components, cables and terminations and replace if required. Check condition of cables from the cabinet to the ASV that are visible.
52	Record	Electrician	Battery condition Record the age of the battery if battery age exceeds 10yrs replace
52	Inspect	Electrician	Pre-test ASV operation by Partly opening and closing ASV using manual control buttons. Carry out basic remediation of issues and generate new work order for significant works
52	Record	Electrician	Notification of alarms to all concerned Advise team leader of false alarms at this site before testing valve
52	Record	Electrician	Testing of battery abilities to operate ASV Turn off power to ASV cabinet so ASV is powered from battery supply and record battery voltage during test period. If Battery voltage falls below 22vdc replace batteries
52	Maintenance	Electrician	Confirm mains failure alarm is operational Verify the SMS power failure alarm has been received.
52	Maintenance	Electrician	Create flow on flow meter to simulate high flow trigger 1 value Simulate flow condition to activate flow trigger level 1 by exceeding trigger 1 flow value by 5L/s. Verify alarm has been sent by SMS
52	Maintenance	Electrician	Create flow on flow meter to simulate high flow trigger 2 value Simulate flow condition to activate flow trigger level 2. by exceeding trigger 2 flow value by





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			5L/s. Verify alarm has been sent by SMS
52	Maintenance	Electrician	Create flow on flow meter to simulate high flow trigger 3 value Simulate flow
			condition to activate flow trigger level 3, by exceeding trigger 3 flow value by
			5L/s. ASV valve should start to close. Verify alarm has been sent by SMS
52	Maintenance	Electrician	Confirm valve activates and initiates closure (can only allow valve closure when
			an alternative supply has been arranged or flow is < 5 L/s or bypass can be
			opened around ASV). If battery voltage drops below 22v when the actuator
			closes replace batteries
52	Maintenance	Electrician	Verify valve status position is correct Check valve position indicator on panel
			display is the same as the actuator display and verify that position display is
			correct
52	Maintenance	Electrician	Do not let the actuator close to affect the network If the ASV cannot be closed
			due to no alternative supply for the zone or the flow exceeds 5 L/s without a
			bypass open around the ASV. Allow the ASV to close to 95% and return to fully
			open position. Once the ASV is back open check that you have received the SMS
			alarms to indicate ASV has closed, when it can be closed. Reset system back to
			normal operation by pressing the inhibit button for more than 5 secs or reset on
			scada screen
52	Maintenance	Electrician	Tests the Verify seismic sensor functions correctly seismic sensor functions/ P-
			alert seismic sensor alarms SMS out when activated, when activated it should
			latch for one hour and close when flow reaches the first trigger value. Record
			the number of actuations have occurred with the seismic sensor
52	Maintenance	Electrician	Verify that the ASV will close form Trigger value 1 when the seismic sensor has
			been activated Simulate flow condition again to activate flow trigger level 1 with
			seismic sensor activated, to confirm ASV closing. Return ASV to open position
			after test. Verify that you have received the SMS alarms and reset system to
			normal
52	Record	Electrician	Record SMS alarms Check and record SMS alarms received to phone.
52	Record	Electrician	Check battery voltage If batter voltage is below 22 volts replace batteries Turn
			on power to ASV Cabinets and restore controls back to Auto.
52	Maintenance	Electrician	Verify scada status Check SCADA and return all alarms back to normal.
52	Maintenance	Electrician	Clean panel remove any dust or debris from inside the panel