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| **SCOPE OF WORK:** |
| Worker will be entering confined space to replace or repair the water (sump) pump, the float balls or the inline valves, to clear blockages or to clean a sanitary pump chamber. Pumps are removed from the space (if pump maintenance is required) and work is conducted outside the confined space.  |

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| **ENTRY PROCEDURES** |
| # | Task | Risks and Hazards | Control Measures |
| 1 | Secure work area for access | * Fall into open chamber
* Active Roadway
 | * Establish 5m safety zone with cones and / or stanchions and hazard tape or with Village mobile equipment/truck to block other vehicle access
 |
| 2 | Remove chamber lid to access space | * Pinch or crush hazard
* Lifting or strain hazard
 | * Proper lifting techniques, MSI control measures. Maintain Neutral spine posture when lifting.
 |
| 3 | Ensure that chamber is drained of water  | * Engulfment
 | * Supervisor/qualified worker ensures chamber is drained and rinsed before work commencement
* Pump out chamber control discharge/runoff. Ensure runoff and discharge vapour is directed to a safe location
* Ensure constant chamber pumping to ensure water level is maintained at a manageable level
 |
| 4 | De-energize, isolate & lockout energy sources for pump, macerator and float power supply  | * Electrical
 | * Turn off mechanical controls at control panel
* Isolate & lock out power source at electrical breaker, unless electricity necessary for work processes
* Bump test system prior to entering space to confirm isolation
 |
| 5 | Control of inflows and outlets of sewer effluent into chamber | * Engulfment
* Atmosphere Migration
 | * Ventilation and monitoring as per entry procedures
* Only conduct work during low flow periods
* Communicate and coordinate with local system users to reduce intake flows (Industrial outflows)
 |
| 6 | Monitor | Basic confined space pre-entry monitoring for O2, Combustible and Toxic gases is required by OHSR Part 9 independent of hazard identification and risk assessment.  | * Instruct worker on any hazards of products
* Monitoring procedures:
* Pre-entry and continuous monitoring
* Utilize a 4-gas detector (O2, LEL, H2S, CO)
* Bump test monitor and Fresh Air Zero
* Record top, middle, bottom readings utilizing an atmospheric monitoring sheet
* Prior to entry, ensure:
* O2 is not below 20.5%
* LEL is not above 0%
* CO is not above 12.5 ppm
* H2S is not above 5 ppm (ceiling limit is 10 ppm)
* Record readings at least every 20 minutes during entry
 |
| 7 | Ventilation  | * Inhalation hazard
* Electrical
 | * Ventilate utilizing positive pressure from the top of the space
* Ventilate at minimum ACH per occupant

Workers will use:A mechanical air blower with 922 cfm capacityThe blower will be stationed immediately outside the entry into the confined space and the hose will be lowered until the end of the hose hangs near the lower/mid-section of the entrant’s body |
| 8 | Install a retrieval system | * Restricted access
* Fall
 | * Utilize a tripod
* Attach the Retrieval device to the worker (SRL/cable winch)
 |
| 9 | Workers enter the space | * Limited access and egress
* Confined work area
* Fall Hazard
 | Entry permit is completed* Workers CS entrant training confirmed
* Documentation in place

 -Hazard Assessment -Safe work procedures - Alternative Measures procedures -Ventilation procedures -Rescue Pre-Plan* Ventilation in place
* Monitoring in place; record monitoring readings
* Standby attendant established,
* Entrants record sheet in place
* Communication established
* Rescue and retrieval attached and in place
 |
| 10  | Proceed with work required within the confined space |  | * Use diligent safe work practices
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| **PROCEDURES FOR RETURN TO SERVICE** |
| # | Task | Risks and Hazards | Control Measures |
| 1 | Confirm work has been completed:If checking check valves to ensure proper seal/actuation, remove associated isolation on inflow and outlet piping | * Engulfment
* Atmosphere
 | * Retrieval system in place
* Utilize a 4-gas detector (O2, LEL, H2S, CO)
* Ventilate at minimum 50 CFM per occupant
 |
| 2 | Workers exits the space | * Limited access and egress
* Confined work area
* Fall Hazard
 | Entry permit is completedDocumentation completed -Hazard Assessment -Safe work procedures -Alternative Measures procedures -Ventilation procedures -Rescue Pre-Plan* Ventilation discontinued
* Monitoring record sheet completed & filed
* Attendant duties complete
* Entrants record sheet completed & filed
* Communication established
* Rescue and retrieval discontinued
 |
| 3 | Remove retrieval system | * Restricted access
 | * Disconnect the workers from the retrieval system
* The tripod is removed and stored ready for use
 |
| 4 | Removal of Ventilation | * Electrical
 | * Remove extension to ventilation
* Unplug ventilation
* Clean & Secure ducting for future use
 |
| 5 | Discontinue Monitoring | * None
 | * Complete documentation for monitoring
* Turn off monitor
* Close and secure entry to tank
* Clean, charge and store the monitor for future use
 |
| 6 | Re-energize pump and float power supply  | * Electrical
 | * Remove Isolation from power source in electrical room
* Turn on pump control at control panel
 |
| 7 | Replace chamber access hatch to covered position | * Pinch or crush hazard
* Lifting or strain hazard
 | * Proper lifting techniques, MSI control measures. Maintain Neutral spine posture when lifting.
 |
| 8 | Return work area to normal operation |   | * Discontinue safety zoning
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