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| **INFORMATION FOR GROUPING OF SPACES: SANITARY LIFT STATION, DRY WELL, WET WELL** | | | |
| **DESCRIPTION:**  Underground chambers located at roadside locations throughout the Village:  #1 Highway 99  #2 Walnut St.  #3 Laburnum St.  #4 Oak St.  #5 Industrial Park  #6 Poplar St.  #7 The Ridge  #8 Eagle Drive   * Chambers contain electrical junction boxes, sump pumps, low voltage monitoring equipment and float ball assemblies. * Chambers may have a grated sub floor platform which is 13’ below surface access opening. * Chambers are constructed of fiberglass. * Chamber for collection and / or transfer of sanitary water. * Designed to pump water to sanitary sewer system once it reaches a set level.   **Volume of the largest space in this grouping**: 49 cubic metres  **Access to space:** Top-down via an internal integral ladder in the confined space.  **Retrieval from space:** Non-entry rescue. Retrieval from the space is accomplished with a mechanical winch, which is secured on to a tripod. Worker to remain on lifeline. | | | |
| **Note: Photographs depict the most commonly encountered Sanitary Lift Stations, Dry Wells and Wet Wells.**  **Prior to entry, verify that all chamber characteristics and hazards described in this document apply to the confined space that is being entered. Any chamber that presents any significant configuration or hazard differences must have a separate hazard assessment written. (WSBC Regulation Part 9.9 a & b)** | | | |
| **CONFINED SPACE?** | **YES** |  |  |
| Is the space designed or intended for continuous human occupancy? | No | Is there limited or restricted entry or exit? | Yes |
| Is the space enclosed or partially enclosed? | Yes | Is the space large enough for entry and configured to work in? | Yes |

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

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| **ENTRY HAZARDS:** |  |  |
| **Hazard** | **Cause of Hazard** | **Control Measures - see Entry Procedures for detailed procedures** |
| Carbon Monoxide (CO) | Possible automobiles and / or construction generators running in the area. | * Ventilation and Monitoring as per Entry Procedures * Establish 5m safety zone with cones and / or stanchions and hazard tape or with Village mobile equipment/truck to block other vehicle access |
| Hydrogen Sulphide (H2S) | Inability to isolate adjacent piping  Possible due to connected sewer piping (migration); Organic material is present due to this being an active sanitary sewer system | * Ventilation and Monitoring as per Entry Procedures * Copy of Alternative Measures application required on site |
| Oxygen Deficient (O2) | Due to visible oxidation in chamber and active organic decomposition.  Less than 20.5% is considered O2 deficient | * Ventilation and Monitoring as per Entry Procedures |
| Fire / Explosion Hazard | Inability to isolate adjacent piping  Possible through the unknown sanitary vapors | * Ventilate at minimum 20 ACH per occupant * Pre-entry testing and continuous atmospheric monitoring using 4-gas detector as per Entry Procedures * Copy of Alternative Measures application required on site |
| Toxic Hazards | Inability to isolate adjacent piping  Possible if there has been an unknown spill in the area or disposal of unknown chemicals into the sewer system | * Pre-entry draining and cleaning to rule out * Ventilation and Monitoring as per Entry Procedures * Full-face Mask respirator with Multi Contaminant / P 100 cartridges * Copy of Alternative Measures application required on site |
| Airborne Bio Hazard | Inability to isolate adjacent piping  Decomposing organic material present  Mold possibly present | * Pre-entry draining and cleaning to rule out * Ventilation and Monitoring as per Entry Procedures * Avoid agitating material on vessel walls * Full-face Mask respirator with Multi Contaminant / P 100 cartridges * Copy of Alternative Measures application required on site |
| Possibility of Absorption or Ingestion | Inability to isolate adjacent piping  Possible if there has been an unknown spill in the area or disposal of unknown chemicals into the sewer system | * Pre-entry draining and cleaning to rule out * Wear protective clothing appropriate for task (coveralls, Tyvek suit) * Impervious gloves * Copy of Alternative Measures application required on site |
| Noise / Vibration | Operating tools and equipment in the space | * CSA approved hearing protection required when noise exceeds 85db or when equipment is in operation |
| Restricted Access | Narrow opening, ladder access into space | * Confined space entrant training with supporting retrieval equipment |
| Gases and Vapours | Inability to isolate adjacent piping  Possible due to connected sewer piping (migration), unknown sanitary vapors, unknown spill in the area. | * Pre-entry draining and cleaning to rule out * Ventilation and Monitoring as per Entry Procedures * Copy of Alternative Measures application required on site |
| Isolation (Working Alone) | Working in a confined space | * When performing work in the chamber a standby person will continuously monitor the entrant. |
| Electrical | Electrical junction box for sump pump power | * GFI requirements to be followed * Isolation & Lock out of power supply at pump breaker & macerator, unless electricity is required for work process |
| Fall | Chambers range from 13’ – 30’ in depth | * Careful entry into space * Entrant be connected to safety/retrieval system |
| Slip or Trip | Wet surfaces | * Keep work area clear and work with care * Wear CSA waterproof steel-toe boots |
| Visibility and Light | Chambers are dark | * Establish portable lighting appliances for illumination |
| Bio Hazards/Materials | Inability to isolate adjacent piping  Decomposing organic material present  Fecal waste present  Mold possibly present  Unknow hazards possibly present | * Pre-entry draining and cleaning to rule out * Wear protective clothing appropriate for task (coveralls, Tyvek suit) * Worker should wear impervious gloves and practice good personal hygiene * Copy of Alternative Measures application required on site |
| Insect or Animal | Accessible to insects and rodents | * Pre-entry inspection and draining to rule out |
| Traffic | Found at roadside locations | * Establish 5m safety zone with cones and / or stanchions and hazard tape or with Village mobile equipment/truck to block other vehicle access |
| Weather | Heavy rain could flood space  All spaces are out in open areas | * Avoid work during storm periods * May be necessary to run drainage pumps during / throughout work process * Dress appropriately for weather |