

General Requirements for Temporary Sanitary Facilities for Construction Site

1. All used water discharged from temporary toilets, sanitary appliances and washing facilities at the construction site must be collected and disposed of via the temporary sanitary facilities. No used water shall be discharged into drains, soil and surrounding environment.
2. Approval from PUB (WRN) on the design of the temporary sanitary facilities must be obtained prior to its construction and operation at the construction site. The design shall be in accordance with the **General Requirements for temporary sanitary facilities for Construction Site**. The design submission to PUB (WRN) shall include the detailed design and layout plans of the temporary sanitary facilities and NEA's Clearance Certificate on Environmental Health.
3. The used water from the temporary toilets, sanitary appliances and washing facilities shall be either collected in holding tank(s) and be disposed of by tankering by a NEA's Licensed Waste Collector (LWC) or be discharged into the existing public sewers if available via a pumped system or other means subject to the site condition and approval of WRN (PUB). In addition, the following requirements shall be complied with:
 - (a) If holding tank is proposed for collection and disposal of used water, the holding tank shall be made of reinforced concrete (RC), steel or GRP. **All holding tanks (includes pump sump) shall be below ground level.**
 - (b) The design calculation on the capacity of all holding tank(s) shall be based on the parameters given in the Code of Practice on Sewerage and Sanitary Works and the number of staff & workers residing at the construction site. In addition, if disposal of used water is by tankering by LWC, the total capacity of holding tank(s) incorporated in the design shall be **at least 10m3**.
 - (c) For any pumped system installed, the pumping mechanism shall be automated to start up the pump based on a preset water level in the holding tank(s) to ensure there is no used water overflow. The pumped system shall consist of at least two pumps – one duty pump and one standby pump. Each of the duty and standby pumps shall be sized to handle the full capacity discharge from the holding tank. The standby pump shall be configured to start automatically in the event of the failure of the duty pump. The pump should be housed in a pump sump of 2 ft x 2.5 ft x 3 ft deep as a guide or sufficient to house both the duty and standby pumps.
 - (d) All holding tank(s) installed including pump sumps should be equipped with SMS alarm based level sensor system having both a high level and overflow level alarms. The pump sumps shall also be considered as holding tanks.
 - i) High level alarm. Used water in the holding tank(s) shall be removed by a LWC or discharged into/leading into the public sewerage system prior to level reaching high level alarm set-point. When, "High level" is reached, the alarm system shall send a "High level" alarm via SMS to alert at least 2 **Senior Management** staff, appointed by the Builder/Contractor, who must take immediate actions that are necessary to prevent used water from overflowing. The high level set-point shall be set at a level that allows sufficient response time for Builder/Contractor to take remedial actions to prevent used water overflow. The format of the SMS shall indicate the following:-

- # Operator's name and contact No: -
- # Location of Trade Fair: -
- # Holding tank capacity: -
- # Type of alarm: - ...High level / Overflow
- # Date of activation: -
- #Time of activation: -

ii) Overflow alarm. “Overflow level” is a level at which overflow is most likely to occur/have occurred. This float switch shall be located above the “High level” float switch and slightly below the overflow level of the holding tank. When activated, the alarm system shall send “Overflow level” alarms via SMS to alert at least 2 **Senior Management** staff of the Builder/ Contractor who owns and maintains the system and also to PUB (Tel:- 96663700). The format of the SMS shall be the same as that for the “High level” as mentioned above.

iii) As part of the submission for PUB (WRN) approval, the names and mobile phone numbers of the two Senior Management staff responsible for receiving the alarm SMS shall be provided.

iv) A signboard, indicating the contact numbers of the two Senior Management staff, shall be prominently displayed to inform members of the public should any abnormalities such as used water overflow so that remedial action could be taken promptly.

- 4 A dedicated and competent contractor shall be engaged to carry out regular preventive and breakdown maintenance of all parts of the temporary sanitary facilities designed for the construction site such as used water pipes, fittings, supports, tanks, pumps, level sensor system M&E equipment etc to ensure proper functionality to prevent used water overflow.
- 5 All parts of the temporary sanitary facilities design for the construction site such as used water pipes, fittings, supports, tanks, pumps, level sensor system M&E equipment shall not be installed inside the drains.
- 6 PUB regularly carries out audit checks on temporary sanitary facilities at construction site. Builder/Contractors are required to produce at the site immediately on demand the following documents during audits:-
 - Preventive and Breakdown maintenance records of all M&E equipment.
 - Licensed Waste Collector disposal receipts (where applicable)
 - PUB (WRN) approval letter for temporary sanitary facilities.
- 7 Where public sewer is available at or near the construction site, the temporary sanitary facilities shall be connected to the public sewer. The sewer connection works shall be carried out in compliance with the detailed plans/drawings approved by PUB, the Code of Practice on Sewerage and Sanitary Works, Sewerage and Drainage Act and the Sewerage and Drainage (Sanitary Works) Regulations.
- 8 No structure/piling/retaining structure (whether temporary or permanent) shall be sited over or close to the existing sewer/manhole within the construction site. All manholes shall be properly and adequately covered to ensure that safety is not compromised. The Builder/Contractor shall ensure that no debris/building material such as sand, earth, gravel, cement, cement grout, timber, wood or any other materials are disposed of or accidentally get into the inspection chambers/manholes/sewerage system.
- 9 Following PUB (WRN)’s approval, if there would be any proposed change in the site condition / access to the holding tank, types of activities or increase in the number of users which may result in an increase of the used water discharging to the temporary sanitary facilities, the Builder/Contractor shall consult PUB (WRN) for approval before making any such changes. In such a case, the Builder/Contractor shall review and upgrade/amend the temporary sanitary facilities including the holding tank to ensure the pipe size and holding capacity are adequate to meet the used water discharge volume/flow rate and incorporate any additional requirements as imposed by PUB(WRN). Amended design for the temporary sanitary facilities shall be resubmitted to PUB (WRN) for approval. Approval from PUB (WRN) on the design of the temporary sanitary facilities must be obtained prior to putting the temporary sanitary facilities into use or operation.
- 10 The Builder/Contractor shall take note that failure to obtain an approval from PUB (WRN) on the design of the temporary sanitary facilities prior to its construction, use or operation or the construction/installation of temporary sanitary facilities not in accordance with the approved design is a violation of Section 11 of the Sewerage and Drainage Act (SDA). In addition, failure to comply with any condition stated in PUB (WRN)’s approval letter is also an offence under Section 63(b) of the SDA. Offenders are liable for enforcement actions.

- 11 For any queries on submission and requirements of temporary sanitary facilities/holding tank, please contact Mrs Lau-Lim Siew kee at Tel:67313254 (email: lim_siew_kee@pub.gov.sg), Ms Mary Yan at Tel:67313306 (email: mary_yan@pub.gov.sg) or Mr Ler Seng Chye at Tel: 67313264 (email: ler_seng_chye@pub.gov.sg)

Mailing address:

PUB [Water Reclamation (Network) Department]
40 Scotts Road #14-01
Environment Building
Singapore 228231