

Precaution Measures to avoid/minimize emergency discharge

It is important to note that the possibility of emergency discharge is extremely low with the following preventive measures:

- Routine/ regular checking of the equipment
- Provision of dual power supply and backup generator to eliminate the risk of power failure;
- Provision of standby equipment (online and on-shelf) for all treatment units;
- Operation of TSTP and STKSTW is under 24-hour monitoring by Shift Team of Sha Tau Kok (for new STKSTW) and/or Shek Wu Hui STW in order to allow inspection and any necessary repair works by DSD at the earliest possible time;
- A remote control and monitoring system (SCADA) will also be installed to allow off-site DSD staff (Shift Team) to monitor the operation of TSTP and STKSTW; and
- Provision of on-site storage of raw sewage up to 6 hours for the TSTP and STKSTW.

Maintenance Procedure

Alert level

Should a problem occur, the Shift Team should be able to identify it within 30min.

Procedure	Anticipated duration
When a problem occur, it will be identified by the DSD staff on duty or Shift Team from alert of SCADA - proceed to Procedure A	30 min
Procedure A (30 minutes after the problem occurred)	
- Report to the works manager	Immediate
- Works manager to assign appropriate staff to carry out inspection and assess the problem	Travel: 45 min Assessment: 30 min
- If the problem is considered major and need outside support – proceed to Procedure B	
- If the problem is considered minor, back-up equipment could be started up by the on-duty staff (for new STKSTW) or could be repaired by the emergency team, carry out repair	120 min
- Monitor the repair progress and water level in the storage tank	
Procedure B (1 hour and 45 minutes after the problem occurred)	

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- Report to senior management	Immediate
- Alert EPD (Regional Office), AFCD and designated public (e.g. STK District Rural Committee, representatives of mariculturists) the possibility of emergency discharge. The mariculturists may consider to relocate their fish raft to avoid the possibly deteriorated water quality during emergency discharge.	Immediate
- Seek external support (e.g. maintenance contractor, DSD staff in other plants)	Travel: 60 min Assessment: 60 min
- Carry out repair by external support	120 min
- If more time to repair is anticipated – proceed to Procedure C	
Total:	5 hours and 45 minutes
Procedure C	
- Assess the problem and estimate the time required for repair	n/a

Based on the above procedures, the plant operation could normally be resumed within 6 hours.

Emergency Response

An Emergency Response Plan shall be prepared and implemented in the event of emergency discharge of untreated sewage. The Emergency Response Plan should include, but not limited to, the following:

- Locations of the sensitive receivers in the vicinity of the emergency discharge;
- A list of relevant government bodies to inform of and to ask for assistance in the event of emergency discharge, including key contact persons and telephone numbers;
- A list of mariculturists to inform of;
- Reporting procedures required in the event of emergency discharge; and
- Responsibilities and procedures for clean-up of the affected water body/sensitive receivers and associated compensation after the emergency discharge.

The Emergency Response Plan shall be agreed with EPD and AFCD prior to the commissioning of the TSTP and STKSTW.

Compensation

DSD would be responsible to handle the followings:

- There were no compensation claims records to DSD due to massive dead fish or loss of fishery due to emergency overflows at STKSTW;

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- Normal and periodical monitoring and water sampling of the treated effluent of the STKSTW would be undertaken in order to fully comply with its discharge license requirements;
- If there is a case affecting the nearby fish culture zone, investigation arrangements for incidents involving massive dead fish or fisheries would be followed:
 - a) Water samples in the vicinity of the fish culture zones and fisheries would be collected
 - b) Pollution impact on fishery / fish culture zone based on pre-established criteria would be assessed
 - c) Cause of fish death, fisheries, etc. would be investigated
 - d) Relevant departments would be consulted for the cause of fish death, fisheries, etc.
 - e) If massive dead fish or fisheries are found to be in connection with the emergency discharge from STKSTW based on (a) to (d) above, compensation would be considered and handled accordingly.