

Additional Water Quality Monitoring Programme for Silt Curtain Efficiency

Purpose

To review the effectiveness of the SS reduction associated with the use of a silt curtain during underwater filling works using “Type A Fill” at FRAW.

Monitoring Stations

There are 2 monitoring stations, one inside the active filling works area (AM6, enclosed by the silt curtain) and one outside the silt curtain (AM5, monitoring station used in the impact monitoring).

The coordinates of AM5 are 834828 (Easting) and 816104 (Northing). Since AM6 is located inside the active filling works area, due to safety consideration and progress of the filling works, its location may varies. The exact location of AM6 for each monitoring should be recorded and reported in the report to be submitted to EPD among others.

Monitoring Programme

During the course of the underwater filling works using “Type A Fill” at FRAW using maximum filling rate (ie 7000 m³ / day), the monitoring shall be conducted twice per day, 3 days per week for two weeks. Sampling will be undertaken upon full release of the barge load.

Water samples shall be collected in duplicate at 3 water depths, namely, 1m below water surface, mid-depth and 1m above seabed, except where the water depth is less than 6m, the mid-depth shall be omitted. Should the water depth be less than 3m, only the mid-depth level shall be monitored. For cooling water intake monitoring stations (M4B and M2A), duplicate samples will only be collected at the intake level.

The water samples collected shall be delivered to a local HOKLAS accredited laboratory for analyses of Suspended Solids (SS). The details of the filling activities including the time, location and amount of filling, the weather conditions including the wind direction, site observations including any visible sediment plume, any defects of the silt curtain system and any other marine works concurrently conducting should be recorded and reported by the sampling team to support the analysis of the water quality monitoring results. Site observations (including tidal status) shall be recorded by the sampling team.

Safety will be the highest priority during sampling works and sampling will cease should conditions warrant ensuring the safety of the staff. Prior to sampling the team will undergo safety training.

Timing for collecting Water Samples

The samples should be collected just after the full release of the barge load of Type A Fill inside the active filling area.

Reporting

A separate report on the sampling results (SS reduction factor) will be submitted to ER, EPD, E T Leader and IEC after completion of the monitoring programme.

Along with the sampling results, information such as weather conditions, observations, dumping location compared with the sampling locations and related distances shall be provided along with information on the tidal state at the time of sampling.

The report for the silt curtain efficiency should also take into account of the data of other monitoring stations so as to cover the efficiency of the 3 sets of silt curtains.

Contingency Plan

Should the silt curtain be found not to be performing to a sufficient level of SS reduction and there is exceedance of the Action and /or Limit Levels, the Event and Action Plan for Water Quality (Table 4.3) stipulated in the EM&A Manual for Central Reclamation Phase III shall be followed, which shall include:

1. Check all plant and equipment;
2. Consider changes of working methods;
3. Discuss with ET, IC(E) and ER and propose mitigation measures to IC(E) and ER within 48 hours;
4. Implement the agreed mitigation measures;
5. As directed by Engineer, slow down or stop all or part of the Type A Filling works.

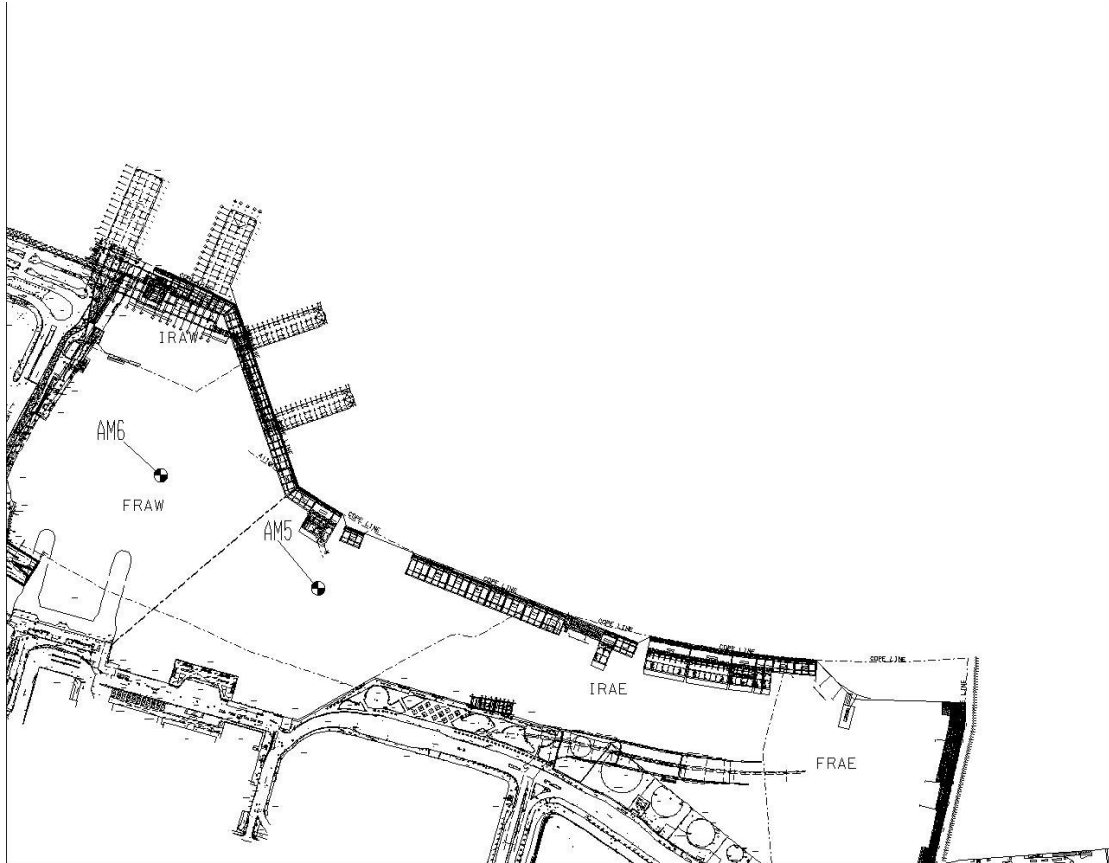


Figure 1. Locations of Water Quality Monitoring Stations for Curtain Efficiency.