



CIWEM HK

The Chartered Institution of Water and
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Views On HATS

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The Main Objective of the Scheme

- To install biological treatment for the sewage, so that Victoria Harbour can meet the water quality objective and to sustain ecological development without posing health risks to human beings, and to provide good quality seawater for toilet flushing.



Why Secondary Treatment is so important?

- SSSDS was abandoned because it was criticised for not having treatment before disposal.
- IRP recommended on site treatment to secondary standard.
- Although HATS has included secondary treatment in stage 2 B, but it has no definite final target completion date.
- Since biological treatment is the ultimate goal, decisions on stage 2A should not be the same as proposed.
- It is the world trend to have secondary treatment for big coastal cities.
- To project Hong Kong World-class city image.



Is Disinfection of CEPT Effluent necessary?

- IRP has no recommendation of disinfection in 2000.
- Victoria Harbour is designated for navigational use only by WPCO.

Chlorination/De-chlorination

Harmful by-products

Difficult to design the dosing systems, it will do more harm than good when overdosing.

Many viruses cannot be killed even the effluent has been chlorinated.

UV Disinfection

Energy demanding

Largest world mercury user



Centralized VS. De-centralized System

1. Centralisation has the advantage of economy of scale, but not to the extent that lack of footprint will cause so much extra to build and maintain.
2. Centralised system will lose the advantage better dilution effects, an example of this effect is the closure of Tsuen Wan beaches after the sewage is centralised at the Stonecutters Island Sewage Treatment Works.
3. De-centralised system may pose a lesser risk in case of a complete system failure.



Proposed Stage 2 A Changes

CIWEM HK suggests that instead of installing disinfection in stage 2A, consideration should be given to :

1. Adoption of option with decentralised sewage treatment system.
2. Additional outfalls from Stonecutters Island to disperse the bacterial impact on Tsuen Wan beaches; and
3. Reduction of load from other points of discharges affecting Tsuen Wan beaches e.g. Pillar Point outfall.



Compact Treatment Technology

- Compact treatment technology may be the only option if the treatment plant is to be built in the urban catchments area due to availability of land. But it will be more expensive to build and maintain.
- Resources should be allocated for further investigation into other biological process options.



Design Parameters

- When designing the treatment plant, the following parameters are needed of revision for economizing the size of the treatment plant.
- Population Projection
- Daily Peak flow Factor
- Discharge standards geared to seasonal changes
- Nutrients removal requirements



Public Private Participation Approach

CIWEM HK supports the Public Private Participation approach.

The Government should actively involve full deployment of local expertise and protect public interests.



Polluter Pays Principle

CIWEM HK supports “Polluter Pays Principle” .

It is worth considering the option of the Government bearing the capital cost and the public bearing the costs of operation and maintenance.

A fair charging method should be devised, making reference to the real situation.



Main Messages

1. The Government should make firm commitment to introduce biological treatment.
2. The proposed disinfection of CEPT effluent is expensive and can be environmentally damaging. It has insufficient justification to proceed.
3. The Government should investigate other options than disinfection to alleviate the situation in Tsuen Wan beaches.

