FRIENDS OF EARTH'S SUBMISSION TO
ENVIRONMENTAL AFFAIRS PANEL
LEGISLATIVE COUNCIL

DRAFT

Preliminary Response on Strategic Sewage Disposal Scheme (SSDS) Environmental Impact Assessment (EIA) Study Briefing Document on Option Evaluation and Comparison

26 September 1998

Introduction

The Administration is launching Phase One consultation of the EIA of SSDS Stage II to identify a preferable long-term option for the eventual sewage treatment level, location of treatment plant(s) and the effluent discharge point into the open sea. Friends of the Earth (FoE) had been following the development of the SSDS for more than six years. Before we commit more money or choose an option for the next stage, it is important to note that the concept is controversial and the sustainability of the scheme is questionable

Discontinuity of the Design Concept from Stage I to Stage II

The initial design of SSDS was based on two ??? concepts,

1. The sewage generated from the urban areas should be collected treated and disposed of by a centralized system.

2. The assimilative power of the ocean is capable of purifying the preliminary treated sewage.

As a result, the Administration believed that primary treatment level (screening and sedimentation) was totally adequate and land space only sufficient for the primary treatment works was allocated at that time. Flexibility of the scheme is not fully addressed at that time. However, the briefing document has clearly pointed out that the quality and quantity of the disposed sewage is far beyond the limits of assimilative power of the sea.

1. The unacceptable *E Coli* level generated by the discharge of the CEPT effluent in the southern water will threaten the survival of the rate Chinese White Dolphin and Finless Porpoise and the coastal beneficial uses such as bathing beaches, spawtting areas and proposed marine parks.
2. The background nitrogen level contributed by the Pearl River is so high and the dissolved oxygen in the Lema Channel is so low in wet season that lead to the non-compliance of water quality objectives (WQOs) with CEPT effluent discharge.
3. The background mercury level of Southern waters has already exceeded WQO.

The findings clearly indicated that disinfection and higher treatment levels such as biological treatment or biological ??? were necessary for the SSDS ??? contrary to the Administration's original concept. However, the flexibility of the scheme is ??? the constraint of the availability of lands that are spacious enough to install the treatment works for higher level ??? Lamma Quarty is the only suitable site identified for biological treatment or biological nutrient removal but the site is also considering for housing development. Therefore, feasibility to upgrade the treatment level is doubtful.

Ecotoxicological assessment

An ecotoxicologist criticised that the briefing document did not assess the ??? case scenario" for each of the sewage disposal option. Instead the impacts of the sewage discharges were averaged ocurring over a period of time. Biological species do not respond to "average" conditions, they respond to their immediate environment. If the sewage discharge will result in period of only one to five hours in which oxygen drops significantly below the "average" conditions described inthe model, this may be sufficient to eliminate a sensitive species. An example of this ??? in Mirs Bay in 1994 when water with too little oxygen entered the Bay for a short period of time killing most of the corals there including some which were one hundred years of age.

Red Tides

Population growth and the recurrence of red tides have not been fully addressed in the study. The increased sewage loading from growing population and high ??? levels in Southern Waters will be of grave concern. It is tempting to suggest that the public could vote for a disposal and treatment option for Stage II with built in flexibility to raise the standard of treatment and future expansion allowance. FoE would like to ??? against a repeat of the Stage I fait ??? scenario which proposed a centralized system limiting alternative distributed treatment system possibilities. Hong Kong should adopt the precautionary principle in treating our sewage to the highest standard before dumping it into our neighbours' backyard in a fishery spawning ground in the South China Sea?

There is the argument in the document that what we clean up will be ??? by the pollution coming down from the Pearl River ??? Are we going to simply follow suit and lump our ??? treated load onto other's? Or can we set a good example? Better still can we not go one step further to jointly develop a Pearl River Delta Marine Quality Management Plan with our neighbours across the border.

???

The geology of the Lema Channel is not well known that is the ??? factor for the workability of the deep tunnel. In view of the repeated stoppages of the SSDS Stage One deep tunnel drilling works caused by the uncertain geotechnical conditions reoccurrence of ??? problems cannot be negiected in Stage Two. If only one outfall is proposed for discharging all the sewage of SSDS, any delay or failure of the tunnel drilling work will jeodarize the whole system. Once again, the flexibility of the scheme is dubious.

??? Modeling

The Three-dimensional Water-Quality and Hydraulic Modeling is the basis for evaluation of water quality for all sewage disposal option and Ecological and Human Health Risk Assessments. However, the document provides no information regarding the development and verification for the ??? and preciseness of the modelling. The results of the model calculation should be demonstrated and compared with the monitored physical conditions, such as current velocity and dispersal of the pollutants, of the real situation in the study area.

Waste Management

It is estimated that when the SSDS is fully commissioned, the total quantity of sewage sludge generated will amount to about 2000 tonnes per day (*ACE paper 1/98*), or 0.72 million tonnes per year. The sludge will be disposed of in the landfills. The capacity of the West New Territories Strategic Landfill (WENT) is 70 million tonnes (*Hong Kong The Environmental Challenge. Environmental Protection Department 1986-1996*) or 7 million tonnes each year for the assurned life span of ten years. In another words the volume of sludge so generated will be equivalent to one-tenth of the WENT landfill capacity.

Alternatively dumping the sludge at the sea has well known adverse impact on marine ecology. However, the environmental impacts of the disposal of the sewage sludge by either landfill or marine dumping have not been fully addressed in the Brieting Document on Option Evaluation and Comparison.

The sewage sludge can be a good soil modifier to improve soil quality of degraded land locally or in China provided that the sludge is free of contamination such as heavy metals. While the SAR Government professes to promote sustainable development. It is

hard to believe that no thoughts were given to recycle this huge quantity of recyclable materials.

The above mentioned are only parts of FoE's comments and quiries about the captioned document. FoE will reflect our concerns to the Administration after the reception of further information and comments from local and oversea experts.