

13. ENVIRONMENTAL MONITORING AND AUDIT

Introduction

13.1 This section further elaborates the recommended environmental monitoring and audit (EM&A) requirements for the construction and operation phases of the Project, based on the assessment findings of the various environmental issues. The objectives of carrying out EM&A for the Project include the following:

- Provide a database against which any short or long term environmental impacts of the Project can be determined.
- Provide an early indication should any of the environmental control measures or practices fail to achieve the acceptable standards.
- Monitor the performance of the Project and the effectiveness of mitigation measures.
- Verify the environmental impacts predicted in the EIA Study.
- Determine project compliance with regulatory requirements, standards and government policies.
- Take remedial action if unexpected problems or unacceptable impacts arise.
- Provide data to enable an environmental audit.

13.2 Details of the specific requirements are presented in a stand-alone EM&A Manual.

Air Quality Impact

13.3 With the implementation of the dust suppression measures stipulated in the *Air Pollution Control (Construction Dust) Regulation* and good site practices, potential construction dust impact would comply with the AQO. Dust monitoring requirements are recommended in the EM&A Manual to ensure the efficacy of the control measures. Details of the EM&A programme are provided in a stand-alone EM&A Manual.

13.4 No adverse air quality or odour impact on the ASRs in vicinity of the chlorination/dechlorination facilities would be identified during operation phase of the Project. Requirement for environmental monitoring and audit is considered not necessary.

Noise Impact

13.5 Construction activities would, if unmitigated, cause noise exceedance at NSR N1 (i.e. barrack buildings) identified in close proximity to the proposed dechlorination plant during particular construction period. By adopting silenced equipment and good site practices, the mitigated noise levels at the NSR due to construction of the dechlorination plant would comply with the daytime construction noise standard as set out in the EIAO-TM.

13.6 Noise monitoring during the construction phase would need to be carried out to ensure that such mitigation measures would be implemented properly. Detailed monitoring requirements are addressed in the stand-alone EM&A Manual.

13.7 With the proper designs of chlorination plant and dechlorination plant, the potential noise impacts at noise sensitive receivers would be controlled within acceptable levels. Operational noise monitoring is not considered necessary.

Water Quality Impact

- 13.8 Effluent quality from the SCISTW will be governed by the Water Pollution Control Ordinance and the associated discharge licence conditions. An operational phase environmental monitoring programme is recommended for the ADF stage to confirm the predictions of the environmental impacts made in the EIA report. Marine water quality monitoring is also recommended during and after any emergency discharge of undisinfected HATS effluent under the ADF stage. Details are given in the separate EM&A Manual as part of the EIA study. Detailed monitoring programme for HATS Stage 2A will be developed under a separate EIA study.
- 13.9 The EIA Study predicts that the Project would not induce adverse effect on sediment deposition pattern, sediment quality and benthos habitats. A monitoring programme for the sediment quality and benthic ecology is proposed in order to verify the Study findings. Details of the programme are provided in the stand-alone EM&A Manual.

Human Health and Ecological Risk

- 13.10 It is recommended to establish a monitoring programme to determine whether the Project would induce increase of TRC and CBP concentrations in seawater and to verify the predictions of the human health and ecological risk assessment. Details of the programme are provided in the stand-alone EM&A Manual.

Ecological Impact

- 13.11 Environmental monitoring and auditing requirements for ecological resources are covered in the EM&A programme recommended for ecological risk impact, and thus a specific monitoring programme for ecological resources is not required.

Fisheries Impact

- 13.12 Environmental monitoring and auditing requirements for fisheries resources are covered in the EM&A programme recommended for ecological risk impact, and thus a specific monitoring programme for fisheries resources is not required.

Waste Management Implications

- 13.13 Waste management will be the contractor's responsibility to ensure that all wastes produced during the construction of the Project are handled, stored and disposed of in accordance with the recommended good waste management practices and EPD's regulations and requirements. The mitigation measures recommended in Section 10 should form the basis of the site Waste Management Plan to be developed by the Contractor at the construction stage.
- 13.14 It is recommended that the waste arisings generated during the construction activities should be audited periodically to determine if wastes are being managed in accordance with approved procedures and the site Waste Management Plan. The audits should look at all aspects of waste management including waste generation, storage, transport and disposal. An appropriate audit programme would be to undertake a first audit near the commencement of the construction works, and then to audit on a quarterly basis thereafter. In addition, the routine site inspections should check the implementation of the recommended good site practices and other waste management mitigation measures.

Hazard to Life

- 13.15 No dangerous goods (DG) would be expected on site during the construction phase of the Project. Thus, identification of precautionary/ mitigation measures is considered not necessary.
- 13.16 The DGs used during the operation phase of the Project should be handled, stored and transported in accordance with FSD's Dangerous Goods Ordinance (Cap.295) and subsidiary regulations and the Material Safety Data Sheet (MSDS) as obtained by the manufacturer/ supplier. The mitigation measures recommended on Chemicals/ Material Management and Employee Protection in Section 11 should be implemented in order to minimise potential hazards of the DGs on site.