

Contract HK 12/02
Central Reclamation Phase III – Engineering Works
Environmental Permit No.: FEP- 01/122/2003

**Certification and Verification for Change of FEP Condition 3.2(a) –
Advanced Dredging & Filling at FRAE - Area 6a & 6b**

ET Leader's Certification

We refer to the proposal by Leighton – China State – Van Oord Joint Venture (hereinafter referred to as the JV) to conduct alternate dredging/ filling at FRAW and FRAE [letter to the Engineer's Representative on 17 Jan 2007 of reference H2189/C1/23996/MP/EY/GL/ST/ec, which requested the proposed dredging & filling works at FRAE prior to the decommissioning of seawater intake M5 – as shown in Figure 4.2, Annex C of the Monthly Environmental Monitoring & Audit Reports and the protection measures that they intend to implement to prevent water quality impacts at relevant intakes].

The JV's proposal differs from the reclamation phasing works that were prescribed in the EP [Clause 3.2 (a)] as a result of the water quality assessment contained in the approved Central Reclamation Phase III EIA Report (Appendix C Detailed Construction Programme).

In the EIA, the assessment was based on the relocation of all seawater intakes to the outer seawall prior to any dredging / reclamation works to be undertaken within FRAE. The assessment undertaken in the EIA and information on the construction activities to be undertaken in the EIA form part of the Environmental Permit, as described in the Environmental Permit (FEP-01/122/2003) Condition 1.7, Part C (Permit Conditions), General Conditions, which states:

"1.7 The Permit Holder shall ensure that the project(s) is/ are designed and constructed in accordance with the information and recommendations described in the EIA Report (Register No. AEIAR 040/2001); or mitigation measures described in the this Permit, or mitigation measures to be recommended in submissions that shall be deposited with or approved by the Director as a result of permit conditions contained in this Permit, or mitigation measures to be recommended under on-going surveillance and monitoring activities during the construction stage of the Project(s). Where recommendations referred to in the documents of the Register are not expressly referred to in this Permit, such recommendations are nevertheless to be implemented unless expressly excluded or implicitly amended in this Permit".

As the JV is proposing to commence dredging and filling works prior to the relocation & decommissioning of the M5 intake, this is considered a change in the construction programme of works and would be subject to Condition 3.2, Part C (Permit Conditions), Submissions or Measures for the Construction Period of the Project(s), of the Environmental Permit, as follows:

"3.2 The Permit Holder shall carry out dredging and filling works in phases for the Project(s) in accordance with:

(a) the sequence shown in Figure 5 to avoid formation of embayed water bodies and prevent water pollution problems; and

(b) the specified maximum dredging and filling volumes together with the maximum hourly dredging rates for each phase of activities shown in Table 1.

Any changes to the dredging and filling requirements in items (a) and (b) above shall be certified by the ET Leader and verified by the IC(E) as conforming to the recommendations contained in the EIA report. The changes shall be immediately documented in the following monthly EM&A report and be made available to the public, following the requirements in Conditions 5.2 and 5.3 below, via internet access in the shortest possible time and in no event later than 2 weeks after the changes have been certified "

The advancement of dredging and filling thus requires certification and verification from the ET and the IC(E) prior to the commencement of the proposed works.

The JV has proposed the advanced dredging and filling works as being necessary for the project to minimise idling of plants engaged in dredging and filling and as being required due to unforeseen delays in the

relocation of relevant intakes. As such, additional measures to reduce the potential for water quality impacts and to monitor the water quality impacts of the proposed dredging will be required by the JV.

The ET has accepted these measures along with additional conditions during the proposed works, which include the following that shall be undertaken during the duration of the proposed advanced dredging & filling works at the FRAE Area 6a & 6b:

(1) The JV shall provide mitigation measures to reduce water quality impacts as stated in their referenced letter;

(2) The JV shall undertake additional water quality monitoring at stations M5 & M6 during mid-flood and mid-ebb tide on the days that monitoring is not undertaken by the ET as part of the routine water monitoring quality during mid flood and mid ebb tidal states;

Further sampling at 2 additional (mobile) monitoring stations (i.e. A & B) in the immediate area of the dredging works (one near to and between the shore and the dredging works and one between the dredging works and the open water to be specified by the ET) shall be undertaken immediately after completion of dredging/ filling works during the days outside the ET's routine monitoring schedule.

Monitoring at M5 shall cease if the intake has been decommissioned. The parameter to be analysed shall cover SS only and shall be undertaken by a HOKLAS accredited laboratory with the results reported within 48 hours of sampling to all relevant parties;

(3) The dredging rates for FRAE (i.e. 98 m³/h) as listed in the Environmental Permit shall not be exceeded during the dredging work. Either dredging or filling works undertaken at FRAE shall only be conducted when dredging or filling at FRAW Area 1, 2, 3, 4a, 4b, 5a & 5b are not being carried out and all filling works at FRAE shall be limited to placement of rock/ sand fill at the seawall trench. Furthermore, protective measures shall be provided for the filling work, which shall include the use of floating silt curtain of a length in excess of the operating barge to prevent dispersion of any silt;

(4) The JV shall undertake dredging in only one area (either 6a or 6b) one at a time;

(5) Should there be any exceedance of the limit levels for the suspended solids in the water quality at any of the seawater intakes M5 or M6 (water sensitive receivers), the advanced works shall cease following the mechanism/ requirements specified in the EM&A Manual. In such cases, additional mitigation measures shall be provided by the JV to the satisfaction of the ET and IC(E) before works can be resumed.

(6) No dredging within 50m of M5 prior to its relocation.

(7) Restrictions on filling works in the Environmental Permit - Clause 3.3 and 3.4 shall apply.

With the implementation of the above measures in full, the Environmental Team Leader and the Independent Environmental Checker have no objection to the changes proposed to FEP Condition 3.2(a) for the advanced dredging & filling works at Area 6a & 6b of FRAE.

Susana Bezy, Environmental Team Leader:




Date: 26 Jan 2007

IC(E) Verification

I hereby verify the above information.

Bill Douglas, Independent Checker (Environment):



Date: 26 Jan 2007