



Proposed 132kV Submarine Cable
Route for Airport "A" to Castle Peak
Power Station Cable Circuit

*Fifth Weekly Impact Monitoring Report -
10th December to 16th December 2007*

21st December 2007

Environmental Resources Management

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CLP Power


Proposed 132kV Submarine Cable
Route for Airport "A" to Castle
Peak Power Station Cable Circuit:
*Fifth Weekly Impact Monitoring
Report – 10th December – 16th
December 2007*

December 2007

Reference 0072833

For and on behalf of
ERM-Hong Kong, Limited

Approved by: Dr Robin Kennish

Signed: 

Position: Director

Date: 21 December 2007

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EXECUTIVE SUMMARY

The construction works for the Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit (Application No. DIR-143/2006) commenced on 10 November 2007. This is the 5th weekly Environmental Monitoring and Audit (EM&A) report presenting the EM&A works carried out during the period from 10 December to 16 December 2007 in accordance with the EM&A Manual.

Summary of Construction Works undertaken during the Reporting Period

During the reporting week, at the Tuen Mun landing site, rock breaking operations were undertaken by both backhoe machine on land and marine rock breaker on board of the work barge. It should be noted that on some occasions rock breaking operation stopped for maintenance during working hours. Marine works involving dredging operations were also conducted during the reporting period.

Water Quality

Three monitoring events were scheduled between 10 December and 16 December 2007. All monitoring events at all designated monitoring stations were performed on schedule, ie on 10 December, 12 December and 14 December 2007.

All measured dissolved oxygen levels complied with the Action and Limit (AL) Levels, while Turbidity and Suspended Solids (SS) levels were all below AL Levels during the reporting week.

Environmental Non-conformance

No exceedance of Action and Limit Levels was recorded during the reporting week.

No non-compliance event was recorded during the reporting week.

No complaint and summons/prosecution was received during the reporting week.

Future Key Issues

During the following week (ie 17 December to 23 December 2007), the Project works will involve marine works in which dredging operation will be conducted.

ERM-Hong Kong, Limited (ERM) was appointed by CLP Power (CLP) as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the Proposed 132kV Submarine Cable Route for Airport “A” to Castle Peak Power Station Cable Circuit (thereinafter called the ‘Project’).

1.1 PURPOSE OF THE REPORT

This is the 5th weekly EM&A report, which summarises the impact monitoring results and audit findings for the EM&A programme during the reporting period from 10 December to 16 December 2007.

1.2 STRUCTURE OF THE REPORT

The structure of the report is as follows:

Section 1 : Introduction

Details the background, purpose and structure of the report.

Section 2 : Project Information

Summarises background and scope of the project, site description, project organisation and contact details, construction programme, the construction works undertaken and the status of Environmental Permits/Licenses during the reporting period.

Section 3 : Environmental Monitoring Requirement

Summarises the monitoring parameters, monitoring programmes, monitoring methodologies, monitoring frequency, monitoring locations, Action and Limit Levels, Event / Action Plans, environmental mitigation measures as recommended in the EIA report and relevant environmental requirements.

Section 4 : Implementation Status on Environmental Mitigation Measures

Summarises the implementation of environmental protection measures during the reporting period.

Section 5 : Monitoring Results

Summarises the monitoring results obtained in the reporting period.

Section 6 : Environmental Non-conformance

Summarises any monitoring exceedance, environmental complaints and environmental summons within the reporting period.

*Section 7 : **Future Key Issues***

Summarises the monitoring schedule for the next week.

*Section 8 : **Review of EM&A Data and Impact Assessment Predictions***

Compares and contrasts the EM&A data in the reporting period with the impact assessment predictions and annotates with explanations of discrepancies.

*Section 9 : **Conclusions***

Presents the key findings of the impact monitoring results.

2.1 BACKGROUND

CLP will install a 132 kV submarine cable circuit to connect Castle Peak Power Station and Hong Kong International Airport in order to meet the electricity load growth at the Airport.

The proposed cable route will start from Tuen Mun and extend southward crossing the Urmston Road to the Airport. The cable landing sites will be located to the west of Butterfly Beach, Tuen Mun and at the northern part of the platform of the Airport (see *Figure 2.1*).

In September 2006, a Project Profile (PP) for the proposed 132kV Cable Route for Airport “A” to Castle Peak CCTS (thereinafter called the ‘Project’) was prepared and submitted to the Environmental Protection Department (EPD) under the *Environmental Impact Assessment Ordinance (EIAO)* for application for Permission to apply directly for Environmental Permit (EP) (Application No. DIR-143/2006).

An Environmental Permit (EP-267/2007) for the works was granted on 29 March 2007. Under the requirements of *Condition 2.12* of the EP, an EM&A programme as set out in the *Environmental Monitoring and Audit Manual (EM&A Manual)* is required to be implemented. In accordance with the *EM&A Manual*, impact monitoring of water quality is required for the Project.

Baseline Monitoring was conducted between 18 October and 28 October 2007. Through communications with EPD, a silt curtain at the water intake of the Airport should already be in place during the baseline monitoring. EPD hence advised the baseline monitoring (thereinafter called *Baseline Environmental Monitoring Part B*) for the Airport East section of works should be postponed until a silt curtain is ready. Accordingly, the baseline monitoring programme was undertaken for the Tuen Mun part only and is thereinafter called *Baseline Environmental Monitoring Part A*. Similarly, the Impact Monitoring was carried out for the Tuen Mun part only. This report, therefore, only presents results of the data from monitoring stations around the Tuen Mun landing site (*Figure 2.1*). Results of the impact monitoring data will therefore be compared against the results of the *Baseline Environmental Monitoring Part A*.

2.2 SITE DESCRIPTION

The proposed 132kV cable is located in-between Tuen Mun and the Hong Kong International Airport. The alignment of the cable is illustrated in *Figure 2.1*.

2.3 *MARINE CONSTRUCTION WORKS UNDERTAKEN DURING REPORTING WEEK*

During the reporting week, rock breaking operations were undertaken by both backhoe machine on land and marine rock breaker on board of the work barge at inshore area of Tuen Mun landing. It should be noted that in some occasions when rock breaking operation were stopped for maintenance during office hours. Marine works involving dredging operations were also conducted during the reporting period.

The works programme of the period between 10 December and 16 December 2007 is presented in *Annex A*.

2.4 *PROJECT ORGANISATION*

The Project Organisation chart and contact details are shown in *Annex B*.

2.5 *STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS*

A summary of the relevant permits, licences, notifications and/or reports on environmental protection for this Project is presented in *Table 2.1*.

Table 2.1 *Summary of Environmental Licensing, Notification, Permit and Reporting Status*

| Permit / Licence / Notification / Report | Reference | Validity Period | Remarks |
|---|-------------|---|------------------------------------|
| EM&A Manual | - | Throughout the construction period | submitted on 25 January 2007 |
| Environmental Permit | EP-267/2007 | Throughout the construction period | granted on 29 March 2007 |
| Baseline Environmental Monitoring Report (Part A) | - | Throughout the construction period for Tuen Mun Section | approved by EPD on 8 November 2007 |

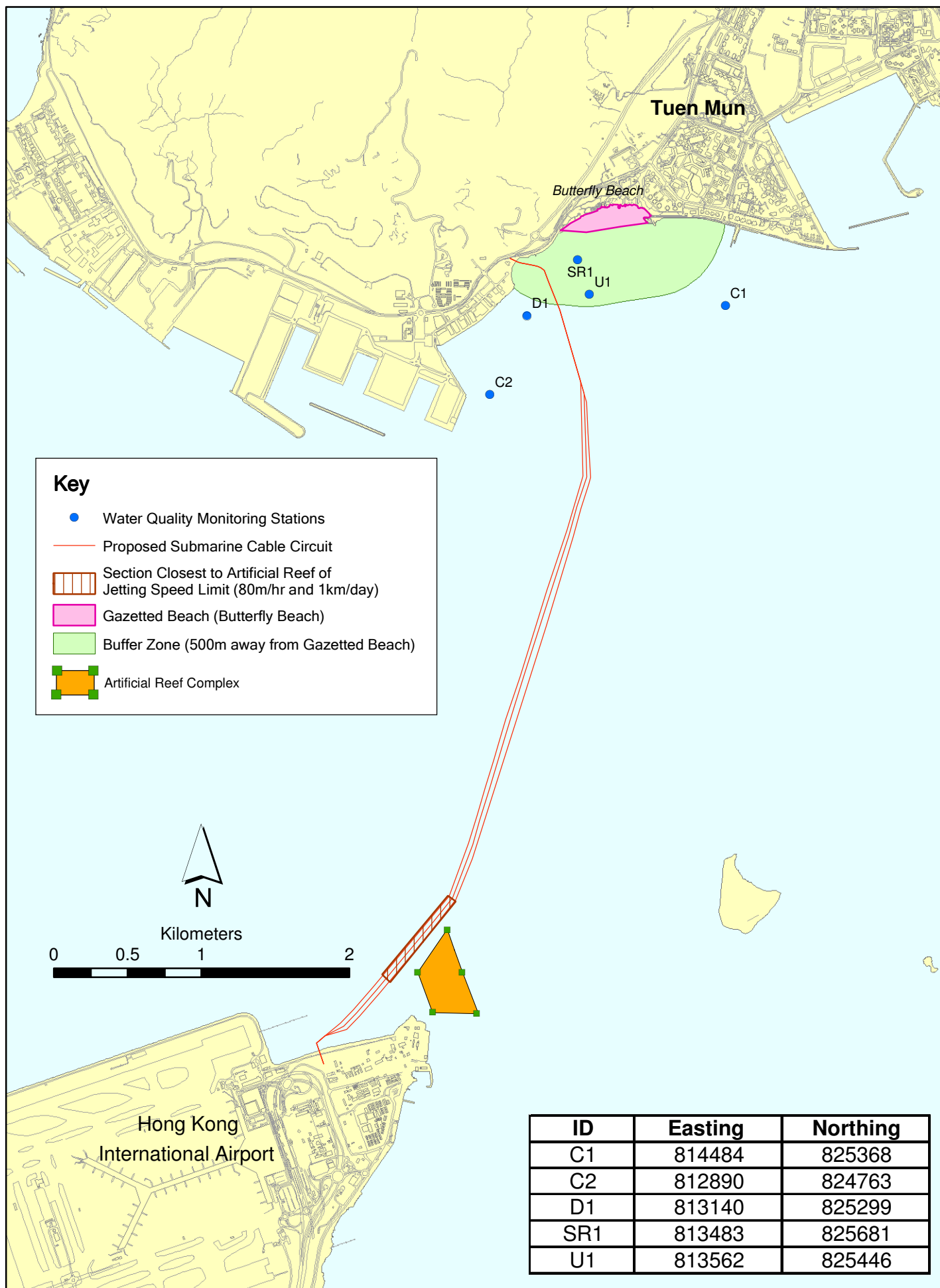


FIGURE 2.1

Location of Water Quality Monitoring around
Tuen Mun Landing Site

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3.1 MONITORING LOCATIONS

In accordance with the *EM&A Manual*, prior to the installation of the cable, water quality sampling was undertaken at stations situated around the cable laying works area at Tuen Mun¹. The locations of the sampling stations are shown in *Figure 2.1*.

- C1 and C2 are Control Stations located over 1 km away from the Tuen Mun landing point and hence are not expected to be influenced by the construction works due to their remoteness;
- U1 and D1 are Gradient Stations situated approximately 300 m either side of the cable alignment for monitoring the effect of dredging at the Tuen Mun landing point and for identifying the source of impact; and,
- SR1 is a Sensitive Receiver used to monitor the effect of the construction works on Butterfly Beach.

The co-ordinates of these monitoring stations are listed in *Table 3.1*.

Table 3.1 Co-ordinates of Water Quality Monitoring Stations (HK Grid)

| Station | Nature | Description | Easting | Northing |
|---------|-----------------|-------------------------------------|-----------|-----------|
| C1 | Control Station | >1 km away from the cable alignment | 814483.53 | 825367.63 |
| C2 | Control Station | >1 km away from the cable alignment | 812890.08 | 824763.40 |
| U1 | Impact Station | 300 m away from the cable alignment | 813561.87 | 825446.07 |
| D1 | Impact Station | 300 m away from the cable alignment | 813140.26 | 825298.99 |
| SR1 | Impact Station | Butterfly Beach | 813483.43 | 825681.39 |

3.2 MONITORING PARAMETERS AND FREQUENCY

The impact water quality monitoring was conducted in accordance with the requirements stated in *EM&A Manual*. These are presented below.

3.2.1 Monitoring Parameters

Parameters measured *in situ* were:

- dissolved oxygen (DO) (% saturation and mg L⁻¹);
- temperature (°C);

¹ The monitoring at the Airport has been postponed until the silt curtains have been installed for the artificial reef near the Airport.

- turbidity (NTU); and
- salinity (‰).

The only parameter measured in the laboratory was:

- suspended solids (SS) (mgL⁻¹).

In addition to the water quality parameters, other relevant data were measured and recorded in field logs, including the location of the sampling stations, water depth, time, weather conditions, sea conditions, tidal state, special phenomena and work activities undertaken around the monitoring and works area that may influence the monitoring results.

3.2.2 *Monitoring Frequency*

Impact water quality monitoring was carried out three times a week. The interval between two sets of monitoring was not less than 36 hours. The monitoring was undertaken at five locations (three impact monitoring stations D1, U1 and SR1, and two control monitoring stations C1 and C2), as shown on *Figure 2.1*. Samples were taken during mid-flood and mid-ebb tidal state on each sampling occasion.

3.3 *MONITORING EQUIPMENT AND METHODOLOGY*

3.3.1 *Monitoring Equipment*

Dissolved Oxygen, Temperature, Salinity, Turbidity Measuring Equipment

The instrument was a portable, weatherproof multi-parameter measuring instrument (YSI 6820) complete with cables, multi-probe sensor, comprehensive operation manuals, and was operable from a DC power source. It was capable of measuring:

- dissolved oxygen levels in the range of 0 – 50 mg L⁻¹; and 0-500% saturation;
- temperature of -5 to 50 °C;
- turbidity levels between 0-1000 NTU (response of the sensor was checked with certified standard turbidity solutions before the start of measurement); and,
- salinity in the range of 0-40 ppt (checked with 30 ppt Salinity solutions before the start of the measurement).

Water Depth Gauge

The water depth gauge affixed to the bottom of the water quality monitoring vessel was used.

Current Velocity and Direction

Current velocity and direction was estimated by conducting float tracking.

Positioning Device

A Global Positioning System (GPS) was used (C-Navigator World DGPS, GPS 72A) during monitoring to ensure the accurate recording of the position of the monitoring vessel before taking measurements. The use of DGPS was used for positioning device, which was well calibrated at appropriate checkpoint.

Water Sampling Equipment

Water samples for suspended solids measurement were collected by the use of a multi-bottle water sampling system (General Oceanics Inc., Rosette Sampler ROS02), consisting of PVC bottles of more than two litres, which could be effectively sealed with cups at both ends. The water sampler had a positive latching system to keep it open and prevent premature closure until released by a messenger when the sampler was at the selected water depth.

3.3.2 Monitoring Methodology

Timing & Frequency

The water quality sampling was undertaken within a 3 hour window of 1.5 hours before and 1.5 hours after mid-flood and mid-ebb tides. Tidal range for flood and ebb tides was not less than 0.5m for capturing representative tides.

Reference was made to the predicted tides at Lok On Pai, which is the tidal station nearest to the Project site, published on the website of Hong Kong Observatory⁽¹⁾. Based on the predicted water levels at Lok On Pai, the impact water quality monitoring was conducted between 3 December and 9 December, following the schedule presented in *Annex C*.

Duplicate samples were collected from each of the monitoring events for *in situ* measurements and laboratory analysis.

Depths

Each station was sampled and measurements were taken at three depths, 1 m below the sea surface, mid depth and 1m above the sea bed.

Protocols

The multi-parameter measuring instrument (YSI 6820) was checked and calibrated by an HOKLAS accredited laboratory before use. Onsite calibration was also carried out to check the responses of sensors and electrodes using certified standard solutions before each use. Sufficient

⁽¹⁾ Hong Kong Observatory (2007) <http://www.hko.gov.hk/tide/eLOPtide.htm> [Accessed on 13 October 2007]

stocks of spare parts were maintained for replacements when necessary, and backup monitoring equipment was made available.

Water samples for SS measurements were collected in high density polythene bottles, packed in ice (cooled to 4° C without being frozen), and delivered to an HOKLAS accredited laboratory as soon as possible after collection.

Laboratory Analysis

All laboratory work was carried out by an HOKLAS accredited laboratory. Water samples of about 1,000 mL were collected at the monitoring and control stations for carrying out the laboratory determinations. The determination work started within the next working day after collection of the water samples. The analyses followed the standard methods as described in *APHA Standard Methods for the Examination of Water and Wastewater*, 19th Edition, unless otherwise specified (APHA 2540D for SS).

The QA/QC details were in accordance with requirements of HOKLAS or another internationally accredited scheme (for details refer to *Annex D*).

3.3.3 Action and Limit Levels

The Action and Limit levels, which were established based on the results of *Baseline Environmental Monitoring Part A*, are presented in *Table 3.2*.

Table 3.2 Action and Limit Levels for Water Quality

| Parameter | Unit | Tide | Depth | Action Level | Limit Level |
|-----------------------|--------------------|-----------|--------------------|--------------|-------------|
| Suspended Solids (SS) | mg L ⁻¹ | Mid-Ebb | Depth-averaged | 12.8 | 13.3 |
| | | Mid-Flood | Depth-averaged | 23.6 | 28.3 |
| Dissolved Oxygen (DO) | mg L ⁻¹ | Mid-Ebb | Surface and Middle | 5.2 | 4.0 |
| | | | Bottom | 5.3 | 2.0 |
| | | Mid-Flood | Surface and Middle | 5.5 | 4.0 |
| | | | Bottom | 5.5 | 2.0 |
| Turbidity | NTU | Mid-Ebb | Depth-averaged | 7.0 | 8.3 |
| | | Mid-Flood | Depth-averaged | 14.8 | 18.9 |

3.3.4 Event and Action Plan

The Event and Action Plan for water quality monitoring which was stipulated in the *EM&A Manual* is presented in *Table 3.3*.

Table 3.3 *Event and Action Plan for Water Quality*

| Event | Action |
|----------------------------|--|
| Action Level Exceedance | <p>Step 1 - repeat sampling event;</p> <p>Step 2 - identify source(s) of impact and confirm whether exceedance was due to the construction works;</p> <p>Step 3 - inform EPD and LCSD and confirm notification of the non-compliance in writing;</p> <p>Step 4 - discuss with cable installation contractor the most appropriate method of reducing suspended solids during cable installation (e.g. reduce cable laying speed/ volume of water used during installation, increase effectiveness of silt curtain).</p> <p>Step 5 - repeat measurements after implementation of mitigation for confirmation of compliance.</p> <p>Step 6 - if non compliance continues - increase measures in Step 3 and repeat measurements in Step 3. If non compliance occurs a third time, suspend cable laying operations.</p> |
| Limit Level Exceedance | <p>Undertake Steps 1-5 immediately, if further non compliance continues at the Limit Level, suspend cable laying operations until an effective solution is identified.</p> |

IMPLEMENTATION STATUS OF ENVIRONMENTAL MITIGATION MEASURES

4.1 RECOMMENDED MITIGATION MEASURES

Mitigation measures for water quality control have been recommended in the Project Profile and the Environmental Permit. The Contractor is responsible for the design and implementation of the following measures.

During cable laying the following will be undertaken:

- Although the sediment loss during both grab dredging and suction dredging is expected to be quite small, the Contractor will be employing a silt curtain around the dredgers to reduce the dispersion of sediments from the landing points.
- Closed grab dredgers will be used to avoid dispersion of suspended solids into the sea.
- The maximum dredging rate at Tuen Mun shore approach will be limited to 1,500 m³ day⁻¹ for working 10 hours per day, i.e., 150 m³ hr⁻¹.
- The maximum dredging rates of grab dredgers and suction method, whichever to be deployed by the contractor, at the Airport shore approach will be limited to 650 m³ day⁻¹ and 1,600 m³ day⁻¹ for working 16 hours per day, i.e., 41 m³ hr⁻¹ and 100 m³ hr⁻¹.
- All barges used for the transport of dredged materials will be fitted with tight bottom seals in order to prevent leakage of material during loading and transport.
- All barges will be filled to a level, to ensure that material does not spill over during loading and transport to the disposal site and that adequate freeboard is maintained to ensure that the decks are not washed by wave action.
- The forward speed of the jetting machine will be limited to a maximum of 80 m hr⁻¹ and 24 hours operation.

4.2 IMPLEMENTATION STATUS OF MITIGATION MEASURES

Since no marine works involving dredging and jetting operations were carried out during this reporting week, the mitigation measures as stipulated in the Project Profile and the EP were not required.

In addition to the regulatory requirements as mentioned in *Section 4.1* above, the Contractor has implemented a precautionary measure for the works

undertaken at the inshore area. As a precautionary measure, a silt curtain has been installed around the excavator that operates at low tide each day.

5.1 IMPACT MONITORING RESULTS

The monitoring data and graphical presentations of the results are included in *Annex E*. These are summarized below.

Three monitoring events were scheduled between 10 December and 16 December 2007. All monitoring at all designated monitoring stations were performed on schedule, ie on 10 December, 12 December and 14 December 2007.

No major activities influencing the water quality were identified between 10 December and 16 December 2007.

All measured dissolved oxygen levels complied with the Action and Limit (AL) Levels, while Turbidity and Suspended Solids (SS) levels were all below AL Levels during the reporting week (*Annex E*).

6 ENVIRONMENTAL NON-CONFORMANCES

6.1 SUMMARY OF ENVIRONMENTAL EXCEEDANCE

No exceedance of the Action and Limit Levels was recorded during the reporting period.

6.2 SUMMARY OF ENVIRONMENTAL NON-COMPLIANCE

No non-compliance event was recorded during the reporting period.

6.3 SUMMARY OF ENVIRONMENTAL COMPLAINT

No complaint was received during the reporting period.

6.4 SUMMARY OF ENVIRONMENTAL SUMMONS AND PROSECUTION

No summons or prosecution on environmental matters was received during the reporting period.

7 *FUTURE KEY ISSUES*

7.1 *KEY ISSUES FOR THE COMING MONTH*

During the following week (ie 17 December to 23 December 2007), the project works will mainly involve marine works, in which dredging operations will be conducted. The expected construction programme is enclosed in *Annex A*.

7.2 *MONITORING SCHEDULE FOR THE COMING MONTHS*

The tentative schedule of impact water quality monitoring December 2007 and January 2008 is presented in *Annex C*. The environmental monitoring will be conducted at the same monitoring locations as those for this reporting week.

Dredging operations has been carried out at Tuen Mun land site during the reporting week, the monitoring data collected are therefore compared with the impact assessment predictions in the Project Profile.

Table 8.1 shows the predicted suspended sediment elevations that were predicted to occur at different distances away from dredging works at the shore ends after taking into account the deployment of silt curtains.

Table 8.1 *Predicted Suspended Sediment Elevations due to Dredging at Shore Ends following the Deployment of Silt Curtains*

| Distance from Source | Tuen Mun (Grab Dredging) | Airport (Grab Dredging) | Airport (Suction Method) |
|----------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| | Concentration (mg L ⁻¹) | Concentration (mg L ⁻¹) | Concentration (mg L ⁻¹) |
| 10 | 200 | 54 | 55 |
| 100 | 20 | 5 | 5 |
| 200 | 10 | 3 | 3 |
| 500 | 4 | 1 | 1 |
| 1000 | 2 | 1 | 1 |
| 2000 | 1 | 0 | 0 |
| 3000 | 1 | 0 | 0 |

Notes:
The ambient surface, bottom and depth-averaged SS levels are 11, 27 and 18 mg L⁻¹ respectively (derived from the average 90th percentile of EPD monitoring station NM3 data).

Table 8.2 shows the suspended sediment levels that were recorded at monitoring stations in the reporting week together with a calculation of elevation based on control station data.

During the reporting week, impact stations SR1, D1 and U1 were located at least 500 m away from the dredger. Calculated elevations of Suspended Sediment at the monitoring stations did not exceed 4 mg L⁻¹ (Table 8.2), which was in line with previous predictions (Table 8.1).

Table 8.2 *Depth-averaged Suspended Sediment (SS) Elevations (mg L⁻¹) due to Dredging at Impact Station During the Reporting Week*

| Depth-averaged SS | Impact Station | | | Control Station | |
|-------------------------------|----------------|------|------|-----------------|-----|
| | SR1 | D1 | U1 | C1 | C2 |
| 10/12/2007 | | | | | |
| Depth-averaged SS (Mid-Ebb) | 5.7 | 8.0 | 6.0 | 7.3 | 7.5 |
| Depth-averaged SS (Mid-Flood) | 4.7 | 5.0 | 5.0 | 5.5 | 6.0 |
| Mid-Ebb Elevation | -1.8 | 0.5 | -1.5 | | |
| Mid-Flood Elevation | -0.8 | -0.5 | -0.5 | | |
| 12/12/2007 | | | | | |

| Depth-averaged SS | Impact Station | | Control Station | | |
|-------------------------------|----------------|------|-----------------|-----|-----|
| | SR1 | D1 | U1 | C1 | C2 |
| Depth-averaged SS (Mid-Ebb) | 6.2 | 7.3 | 7.5 | 7.0 | 8.8 |
| Depth-averaged SS (Mid-Flood) | 6.0 | 5.8 | 7.5 | 6.8 | 7.8 |
| Mid-Ebb Elevation | -2.7 | -1.5 | -1.3 | | |
| Mid-Flood Elevation | -0.8 | -1.0 | 0.7 | | |
| 14/12/2007 | | | | | |
| Depth-averaged SS (Mid-Ebb) | 6.0 | 8.7 | 6.3 | 6.7 | 7.3 |
| Depth-averaged SS (Mid-Flood) | 7.2 | 7.3 | 6.3 | 5.7 | 8.7 |
| Mid-Ebb Elevation | -1.3 | 1.3 | -1.0 | | |
| Mid-Flood Elevation | 1.5 | 1.7 | 0.7 | | |

This Weekly Impact Monitoring Report presents the EM&A work undertaken during the period from 10 December to 16 December 2007 in accordance with the EM&A Manual and the requirements under *EP-267/2007*.

No exceedance of Action and Limit Levels was recorded during the reporting week.

No non-compliance event was recorded during the reporting week.

No complaint and summons/prosecution was received during the reporting week.

The ET will keep track of the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

Annex A

Works Programme of the
Period between 10 December
and 30 December 2007

Marine Work of 132kV Submarine Cable Installation between Airport to Tuen Mun

| | | Workdone for Last Week | | | | | | | Plan for This Week | | | | | | | Anticipate Plan for Next Week | | | | | | |
|---|--------------------------------|------------------------|-------|-------|-------|-------|-------|-------|--------------------|-------|-------|-------|-------|-------|-------|-------------------------------|-------|-------|-------|-------|-------|-------|
| | Item Date | 10/12 | 11/12 | 12/12 | 13/12 | 14/12 | 15/12 | 16/12 | 17/12 | 18/12 | 19/12 | 20/12 | 21/12 | 22/12 | 23/12 | 24/12 | 25/12 | 26/12 | 27/12 | 28/12 | 29/12 | 30/12 |
| 1 | Mobilization of Plants | | | | | | | | | | | | | | | | | | | | | |
| 2 | Utilities Detection | | | | | | | | | | | | | | | | | | | | | |
| 3 | Mobilization of Marine Plant | | | | | | | | | | | | | | | | | | | | | |
| 4 | Site Setting Out | | | | | | | | | | | | | | | | | | | | | |
| 5 | Site Clearance | | | | | | | | | | | | | | | | | | | | | |
| 6 | Installation of Silt Curtain | | | | | | | | | | | | | | | | | | | | | |
| 5 | Rock Breaking (Land Portion) | | | | | | | | | | | | | | | | | | | | | |
| 6 | Rock Breaking (Marine Portion) | | | | | | | | | | | | | | | | | | | | | |
| 7 | Dredging | | | | | | | | | | | | | | | | | | | | | |

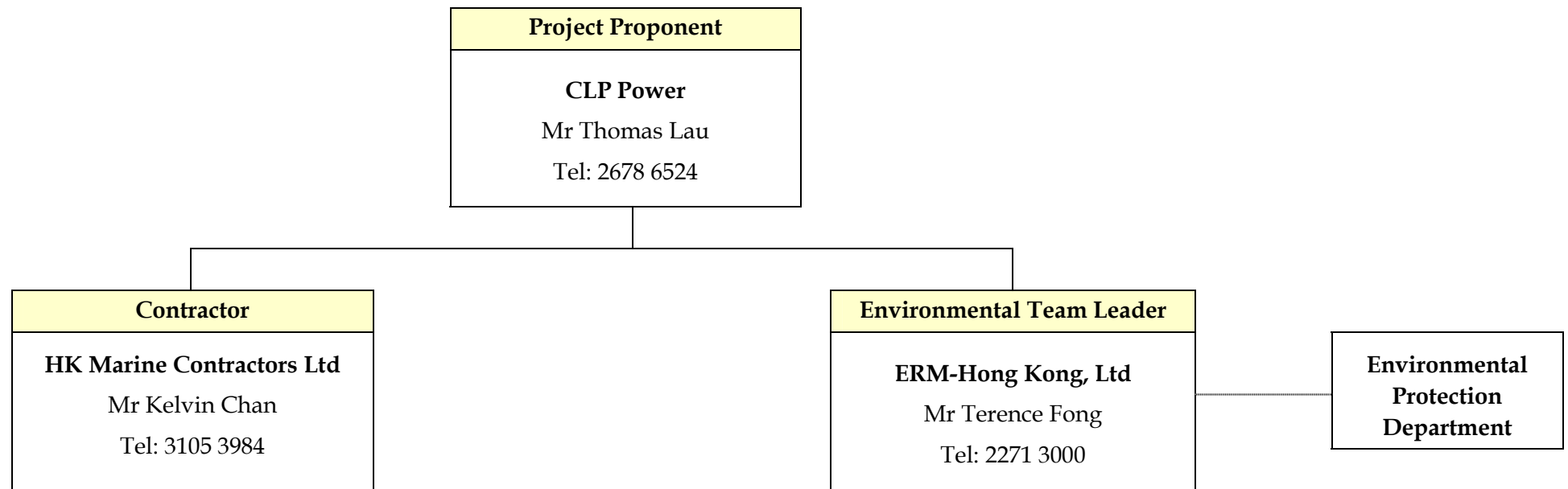
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CNP GW-RW00610-07 date start

Annex B

Project Organisation Chart (with Contact Details)

ANNEX B - PROJECT ORGANIZATION (WITH CONTACT DETAILS)



————— Line of Project Management Responsibility
..... Communication Channel

Annex C

Tentative Monitoring Schedule

**Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit
Tentative Water Quality Monitoring Schedule at Tuen Mun - December 2007**

Reference Tidal Station: Lok On Pai (source: HK Observatory Department)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|---|---------|---|----------|---|---|
| | | | | | | 01-Dec |
| 02-Dec | 03-Dec | 04-Dec | 05-Dec | 06-Dec | 07-Dec | 08-Dec |
| | Mid-Ebb 07:52 Mid-Flood 15:02 Impact Monitoring (Tuen Mun) | | Mid-Ebb 09:59 Mid-Flood 15:58 Impact Monitoring (Tuen Mun) | | | Mid-Ebb 12:11 Mid-Flood 17:12 Impact Monitoring (Tuen Mun) |
| 09-Dec | 10-Dec | 11-Dec | 12-Dec | 13-Dec | 14-Dec | 15-Dec |
| | Mid-Ebb 13:19 Mid-Flood 18:12 Impact Monitoring (Tuen Mun) | | Mid-Ebb 14:27 Mid-Flood 19:16 Impact Monitoring (Tuen Mun) | | Mid-Ebb 15:51 Mid-Flood 20:37 Impact Monitoring (Tuen Mun) | |
| 16-Dec | 17-Dec | 18-Dec | 19-Dec | 20-Dec | 21-Dec | 22-Dec |
| | Mid-Flood 13:12 Mid-Ebb 19:12 Impact Monitoring (Tuen Mun) | | Mid-Ebb 07:47 Mid-Flood 14:29 Impact Monitoring (Tuen Mun) | | Mid-Ebb 10:11 Mid-Flood 15:47 Impact Monitoring (Tuen Mun) | |
| 23-Dec | 24-Dec | 25-Dec | 26-Dec | 27-Dec | 28-Dec | 29-Dec |
| | | | | | | |
| 30-Dec | 31-Dec | | | | | |
| | | | | | | |

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

**Proposed 132kV Submarine Cable Route for Airport "A" to Castle Peak Power Station Cable Circuit
Tentative Water Quality Monitoring Schedule around Tuen Mun - January 2008**

Reference Tidal Station: Lok On Pai (source: HK Observatory Department)

| Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------|---|---|---|----------|---|----------|
| | | 01-Jan | 02-Jan | 03-Jan | 04-Jan | 05-Jan |
| | | Mid-Ebb 06:08 Mid-Flood 13:25 Impact Monitoring (Tuen Mun) | | | Mid-Ebb 10:19 Mid-Flood 14:59 Impact Monitoring (Tuen Mun) | |
| 06-Jan | 07-Jan | 08-Jan | 09-Jan | 10-Jan | 11-Jan | 12-Jan |
| | Mid-Ebb 12:26 Mid-Flood 17:12 Impact Monitoring (Tuen Mun) | | Mid-Ebb 13:43 Mid-Flood 18:41 Impact Monitoring (Tuen Mun) | | Mid-Ebb 14:59 Mid-Flood 20:09 Impact Monitoring (Tuen Mun) | |
| 13-Jan | 14-Jan | 15-Jan | 16-Jan | 17-Jan | 18-Jan | 19-Jan |
| | Mid-Flood 11:14 Mid-Ebb 17:09 Impact Monitoring (Tuen Mun) | | Mid-Flood 12:25 Mid-Ebb 19:23 Impact Monitoring (Tuen Mun) | | Mid-Ebb 08:24 Mid-Flood 13:50 Impact Monitoring (Tuen Mun) | |
| 20-Jan | 21-Jan | 22-Jan | 23-Jan | 24-Jan | 25-Jan | 26-Jan |
| | Mid-Ebb 12:11 Mid-Flood 17:04 Impact Monitoring (Tuen Mun) | | Mid-Ebb 13:40 Mid-Flood 18:53 Impact Monitoring (Tuen Mun) | | Mid-Ebb 14:55 Mid-Flood 20:22 Impact Monitoring (Tuen Mun) | |
| 27-Jan | 28-Jan | 29-Jan | 30-Jan | 31-Jan | | |
| | Mid-Flood 10:45 Mid-Ebb 16:42 Impact Monitoring (Tuen Mun) | | Mid-Flood 11:35 Mid-Ebb 18:47 Impact Monitoring (Tuen Mun) | | | |

The schedule is subject to agreement from the EPD on the monitoring times. The schedule will be revised after reviewing the progress of the construction works or due to adverse (safety, weather etc) conditions.

Annex D

QA/QC Results of Laboratory Testing for Suspended Solids



CERTIFICATE OF ANALYSIS

| | | | | | |
|--------------|---|--------------|---|----------------|-----------------|
| Client | : ERM HONG KONG | Laboratory | : ALS Technichem (HK) Pty Ltd | Page | : 1 of 6 |
| Contact | : MS KAREN LUI | Contact | : Alice Wong | Work Order | : HK0717862 |
| Address | : 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG | Address | : 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong | | |
| E-mail | : Karen.Lui@erm.com | E-mail | : Alice.Wong@alsenviro.com | | |
| Telephone | : 2271 3000 | Telephone | : +852 2610 1044 | | |
| Facsimile | : 2723 5660 | Facsimile | : +852 2610 2021 | | |
| Project | : EM&A FOR THE PROPOSED 132kV SUBMARINE CABLE ROUTE FOR AIRPORT "A" TO CASTLE PEAK CCTS | Quote number | : ---- | Date received | : 11 Dec 2007 |
| Order number | : ---- | | | Date of issue | : 13 Dec 2007 |
| C-O-C number | : ---- | | | No. of samples | - Received : 60 |
| Site | : ---- | | | | - Analysed : 60 |

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0717862 supersedes any previous reports with this reference. The completion date of analysis is 13 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0717862 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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| <i>Signatory</i> | <i>Position</i> | <i>Authorised results for:-</i> |
| Fung Lim Chee, Richard | General Manager | Inorganics |



Quality Control - Laboratory Duplicate (DUP) Results

| Matrix Type: WATER | | | | Duplicate (DUP) Results | | | | |
|--|---------------------------|------------------------------|------------|-------------------------|-------|-----------------|------------------|---------|
| Laboratory Sample ID | Client Sample ID | Method: Analysis Description | CAS number | LOR | Units | Original Result | Duplicate Result | RPD (%) |
| EA/ED: Physical and Aggregate Properties (QC Lot: 553576) | | | | | | | | |
| HK0717862-001 | 2007/12/10/12:03/C1/B/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 8 | 6 | 14.2 |
| | REPL. 1 | | | | | | | |
| HK0717862-011 | 2007/12/10/12:16/SR1/M/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 5 | 6 | 0.0 |
| | REPL. 2 | | | | | | | |
| EA/ED: Physical and Aggregate Properties (QC Lot: 553577) | | | | | | | | |
| HK0717862-021 | 2007/12/10/12:32/D1/T/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 7 | 7 | 0.0 |
| | REPL. 1 | | | | | | | |
| HK0717862-031 | 2007/12/10/17:07/C1/B/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 8 | 8 | 0.0 |
| | REPL. 1 | | | | | | | |
| EA/ED: Physical and Aggregate Properties (QC Lot: 553578) | | | | | | | | |
| HK0717862-041 | 2007/12/10/17:28/SR1/M/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 4 | 4 | 0.0 |
| | REPL. 2 | | | | | | | |
| HK0717862-052 | 2007/12/10/17:44/D1/B/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 7 | 6 | 0.0 |
| | REPL. 2 | | | | | | | |

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

| Matrix Type: WATER | | Method Blank (MB) Results | | | Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results | | | | | | | |
|--|--|------------------------------|------------|------|--|--------------------|--------|---------------------|-----|----------|------|-------|
| | | | | | Spike Concentration | Spike Recovery (%) | | Recovery Limits (%) | | RPDs (%) | | |
| | | Method: Analysis Description | CAS number | LOR | | Units | Result | SCS | DCS | Low | High | Value |
| EA/ED: Physical and Aggregate Properties (QCLot: 553576) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 102 | ---- | 85 | 115 | ---- | ---- |
| EA/ED: Physical and Aggregate Properties (QCLot: 553577) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 94.0 | ---- | 85 | 115 | ---- | ---- |
| EA/ED: Physical and Aggregate Properties (QCLot: 553578) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 98.5 | ---- | 85 | 115 | ---- | ---- |



CERTIFICATE OF ANALYSIS

| | | | | | |
|--------------|---|--------------|---|----------------|-----------------|
| Client | : ERM HONG KONG | Laboratory | : ALS Technichem (HK) Pty Ltd | Page | : 1 of 6 |
| Contact | : MS KAREN LUI | Contact | : Alice Wong | Work Order | : HK0718011 |
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| E-mail | : Karen.Lui@erm.com | E-mail | : Alice.Wong@alsenviro.com | | |
| Telephone | : 2271 3000 | Telephone | : +852 2610 1044 | | |
| Facsimile | : 2723 5660 | Facsimile | : +852 2610 2021 | | |
| Project | : EM&A FOR THE PROPOSED 132kV SUBMARINE CABLE ROUTE FOR AIRPORT "A" TO CASTLE PEAK CCTS | Quote number | : ---- | Date received | : 13 Dec 2007 |
| Order number | : ---- | | | Date of issue | : 17 Dec 2007 |
| C-O-C number | : ---- | | | No. of samples | - Received : 60 |
| Site | : ---- | | | | - Analysed : 60 |

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718011 supersedes any previous reports with this reference. The completion date of analysis is 17 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718011 : **Sample(s) were received in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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| <i>Signatory</i> | <i>Position</i> | <i>Authorised results for:-</i> |
| Fung Lim Chee, Richard | General Manager | Inorganics |



Quality Control - Laboratory Duplicate (DUP) Results

| Matrix Type: WATER | | | | Duplicate (DUP) Results | | | | |
|--|---------------------------|------------------------------|------------|-------------------------|-------|-----------------|------------------|---------|
| Laboratory Sample ID | Client Sample ID | Method: Analysis Description | CAS number | LOR | Units | Original Result | Duplicate Result | RPD (%) |
| EA/ED: Physical and Aggregate Properties (QC Lot: 555609) | | | | | | | | |
| HK0718011-001 | 2007/12/12/13:02/C1/B/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 8 | 9 | 12.7 |
| | REPL. 1 | | | | | | | |
| HK0718011-011 | 2007/12/12/13:20/SR1/M/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 5 | 4 | 0.0 |
| | REPL. 2 | | | | | | | |
| EA/ED: Physical and Aggregate Properties (QC Lot: 555610) | | | | | | | | |
| HK0718011-021 | 2007/12/12/13:36/D1/T/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 7 | 6 | 0.0 |
| | REPL. 1 | | | | | | | |
| HK0718011-032 | 2007/12/12/18:32/C1/M/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 7 | 8 | 0.0 |
| | REPL. 1 | | | | | | | |
| EA/ED: Physical and Aggregate Properties (QC Lot: 555611) | | | | | | | | |
| HK0718011-041 | 2007/12/12/18:46/SR1/M/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 5 | 6 | 21.4 |
| | REPL. 2 | | | | | | | |
| HK0718011-051 | 2007/12/12/19:03/D1/T/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 7 | 6 | 0.0 |
| | REPL. 1 | | | | | | | |

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

| Matrix Type: WATER | | Method Blank (MB) Results | | | Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results | | | | | | | |
|--|--|------------------------------|------------|------|--|--------------------|--------|---------------------|-----|----------|------|-------|
| | | | | | Spike Concentration | Spike Recovery (%) | | Recovery Limits (%) | | RPDs (%) | | |
| | | Method: Analysis Description | CAS number | LOR | | Units | Result | SCS | DCS | Low | High | Value |
| EA/ED: Physical and Aggregate Properties (QCLot: 555609) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 95.5 | ---- | 85 | 115 | ---- | ---- |
| EA/ED: Physical and Aggregate Properties (QCLot: 555610) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 96.0 | ---- | 85 | 115 | ---- | ---- |
| EA/ED: Physical and Aggregate Properties (QCLot: 555611) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 102 | ---- | 85 | 115 | ---- | ---- |



CERTIFICATE OF ANALYSIS

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| Client | : ERM HONG KONG | Laboratory | : ALS Technichem (HK) Pty Ltd | Page | : 1 of 6 |
| Contact | : MS KAREN LUI | Contact | : Alice Wong | Work Order | : HK0718272 |
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| Project | : EM&A FOR THE PROPOSED 132kV SUBMARINE CABLE ROUTE FOR AIRPORT "A" TO CASTLE PEAK CCTS | Quote number | : ---- | Date received | : 15 Dec 2007 |
| Order number | : ---- | | | Date of issue | : 18 Dec 2007 |
| C-O-C number | : ---- | | | No. of samples | - Received : 60 |
| Site | : ---- | | | | - Analysed : 60 |

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718272 supersedes any previous reports with this reference. The completion date of analysis is 17 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

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| <i>Signatory</i> | <i>Position</i> | <i>Authorised results for:-</i> |
| Fung Lim Chee, Richard | General Manager | Inorganics |



Quality Control - Laboratory Duplicate (DUP) Results

| Matrix Type: WATER | | | | Duplicate (DUP) Results | | | | |
|--|---------------------------|------------------------------|------------|-------------------------|-------|-----------------|------------------|---------|
| Laboratory Sample ID | Client Sample ID | Method: Analysis Description | CAS number | LOR | Units | Original Result | Duplicate Result | RPD (%) |
| EA/ED: Physical and Aggregate Properties (QC Lot: 558072) | | | | | | | | |
| HK0718272-001 | 2007/12/14/14:30/C1/B/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 9 | 9 | 0.0 |
| | REPL. 1 | | | | | | | |
| HK0718272-011 | 2007/12/14/14:47/SR1/M/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 6 | 6 | 0.0 |
| | REPL. 2 | | | | | | | |
| EA/ED: Physical and Aggregate Properties (QC Lot: 558073) | | | | | | | | |
| HK0718272-020 | 2007/12/14/15:26/D1/M/E/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 8 | 9 | 0.0 |
| | REPL. 1 | | | | | | | |
| HK0718272-031 | 2007/12/14/20:01/C1/B/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 6 | 7 | 0.0 |
| | REPL. 1 | | | | | | | |
| EA/ED: Physical and Aggregate Properties (QC Lot: 558074) | | | | | | | | |
| HK0718272-041 | 2007/12/14/20:17/SR1/M/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 8 | 7 | 0.0 |
| | REPL. 2 | | | | | | | |
| HK0718272-051 | 2007/12/14/20:39/D1/T/F/ | EA025: Suspended Solids (SS) | ---- | 1 | mg/L | 6 | 5 | 0.0 |
| | REPL. 1 | | | | | | | |

Quality Control - Method Blank (MB), Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results

| Matrix Type: WATER | | Method Blank (MB) Results | | | Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results | | | | | | | |
|--|--|------------------------------|------------|------|--|--------------------|--------|---------------------|-----|----------|------|------|
| | | | | | Spike | Spike Recovery (%) | | Recovery Limits (%) | | RPDs (%) | | |
| | | Method: Analysis Description | CAS number | LOR | | Units | Result | Concentration | SCS | DCS | Low | High |
| EA/ED: Physical and Aggregate Properties (QCLot: 558072) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 99.0 | ---- | 85 | 115 | ---- | ---- |
| EA/ED: Physical and Aggregate Properties (QCLot: 558073) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 97.0 | ---- | 85 | 115 | ---- | ---- |
| EA/ED: Physical and Aggregate Properties (QCLot: 558074) | | | | | | | | | | | | |
| EA025: Suspended Solids (SS) | | ---- | 2 | mg/L | <2 | 20 mg/L | 95.0 | ---- | 85 | 115 | ---- | ---- |

Annex E

Impact Water Quality Monitoring Results

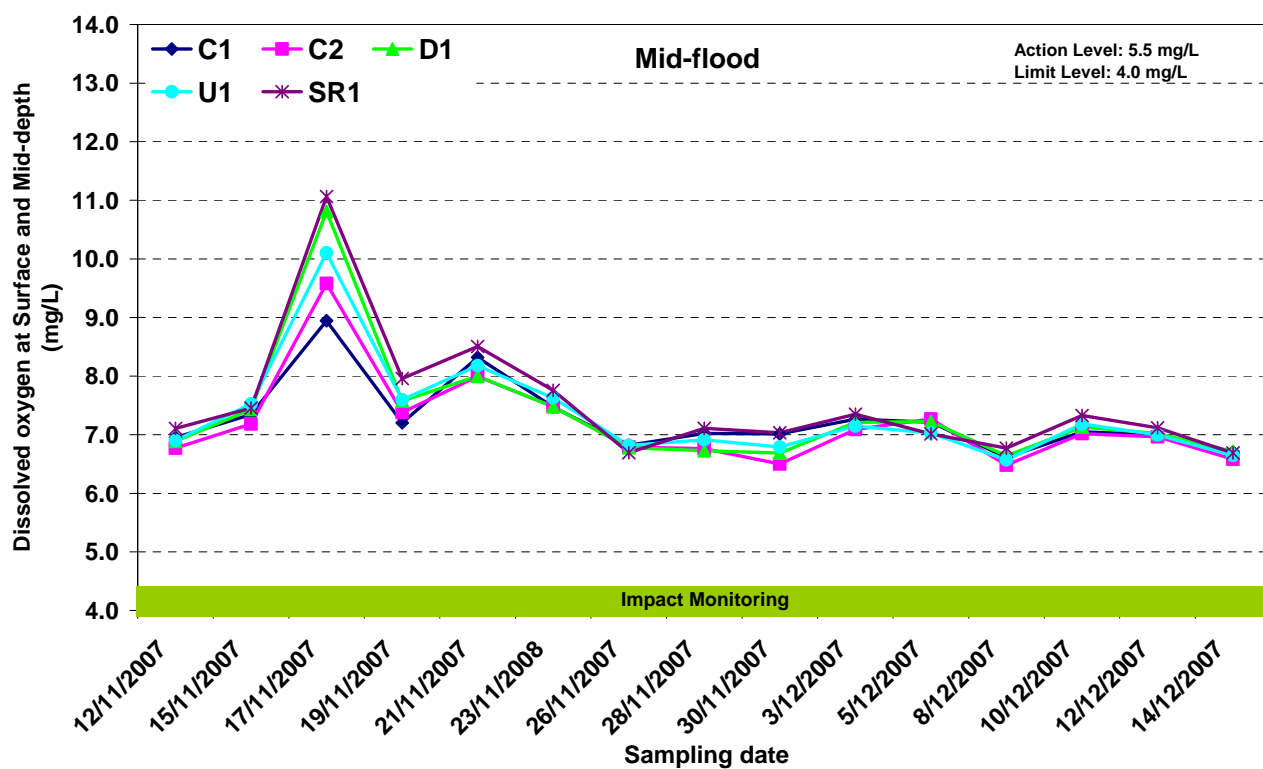
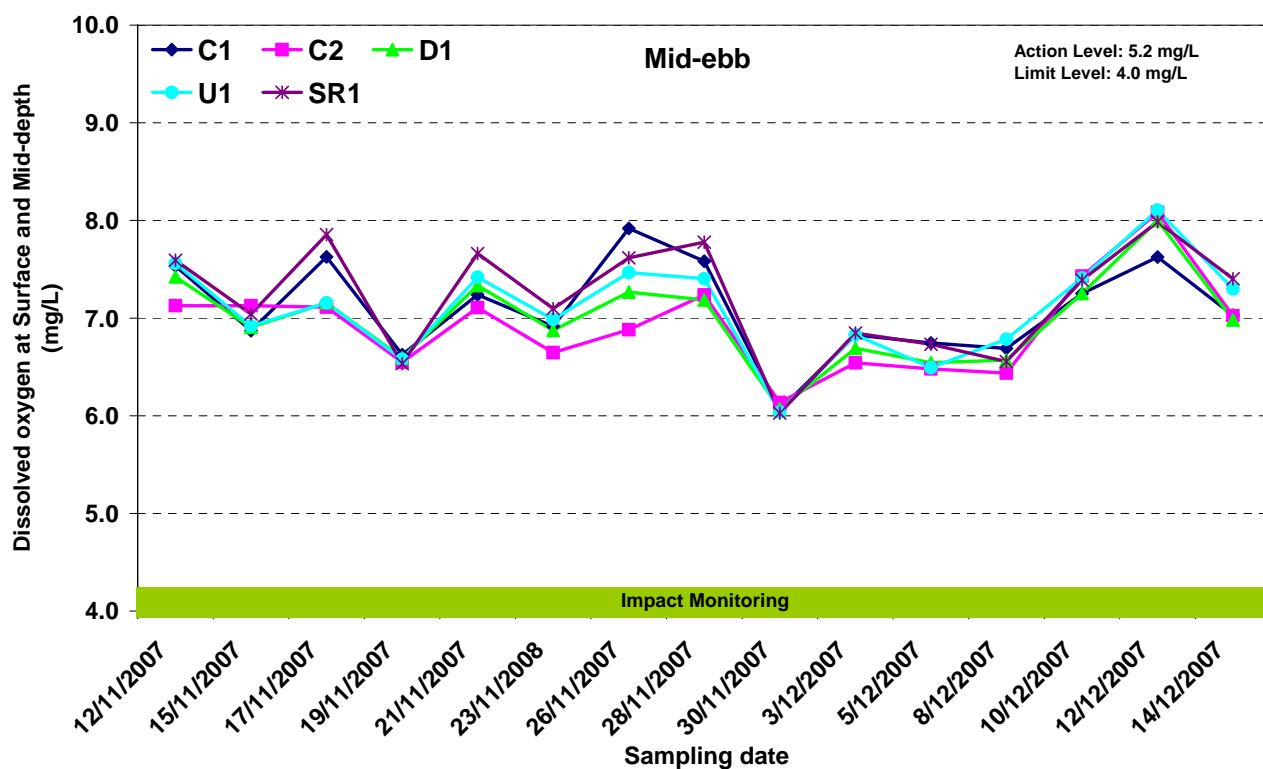


Figure E1 Dissolved oxygen concentration (mean of surface and mid-depth) (mg/L) of water samples from the five sampling locations at mid-ebb and mid-flood between 10 December and 16 December 2007, and previous monitoring period between 12 November and 8 December 2007



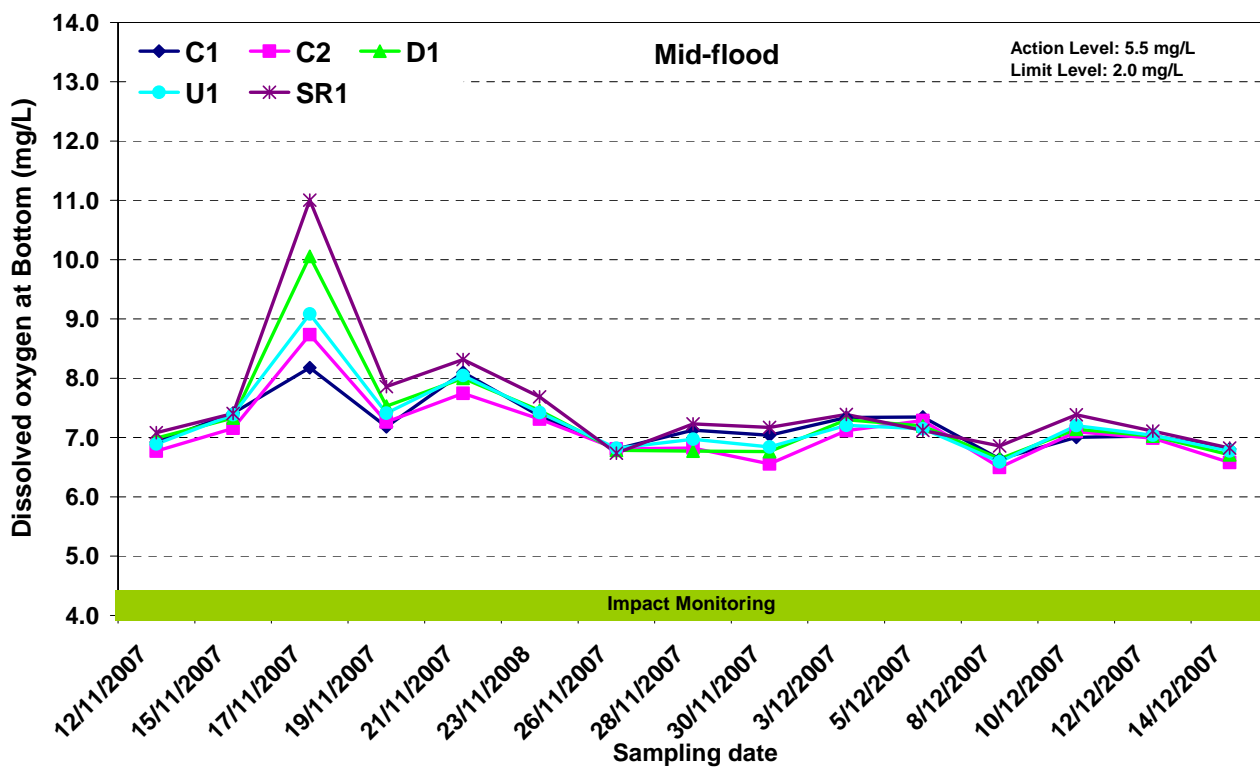
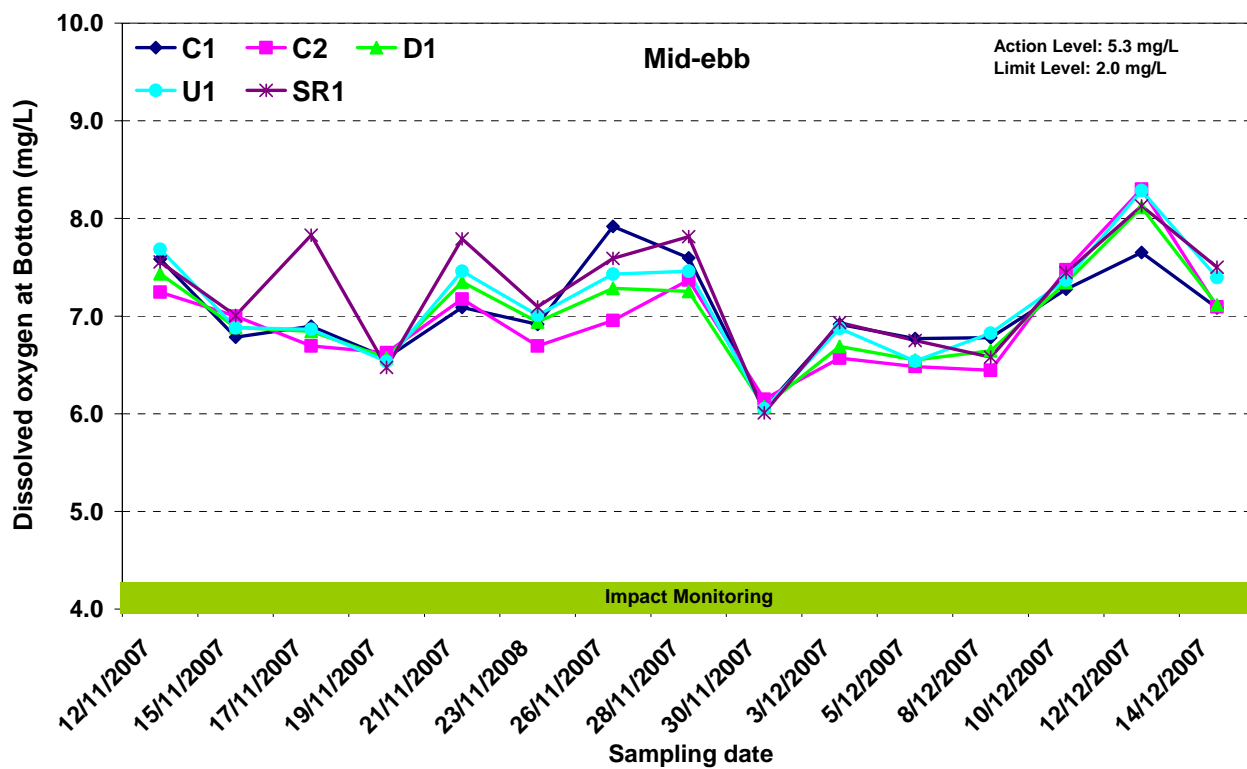


Figure E2 Dissolved oxygen concentration (bottom) (mg/L) of water samples from the five sampling locations at mid-ebb and mid-flood between 10 December and 16 December 2007, and previous monitoring period between 12 November and 8 December 2007

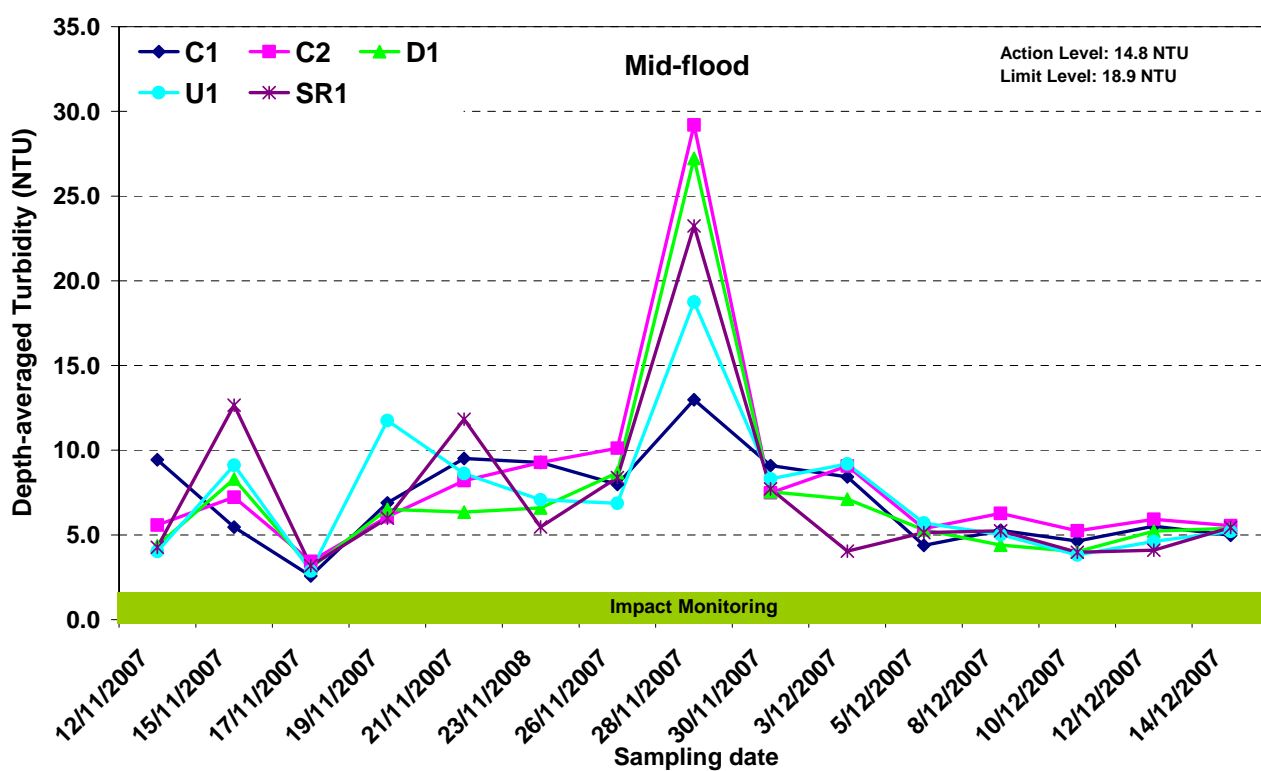
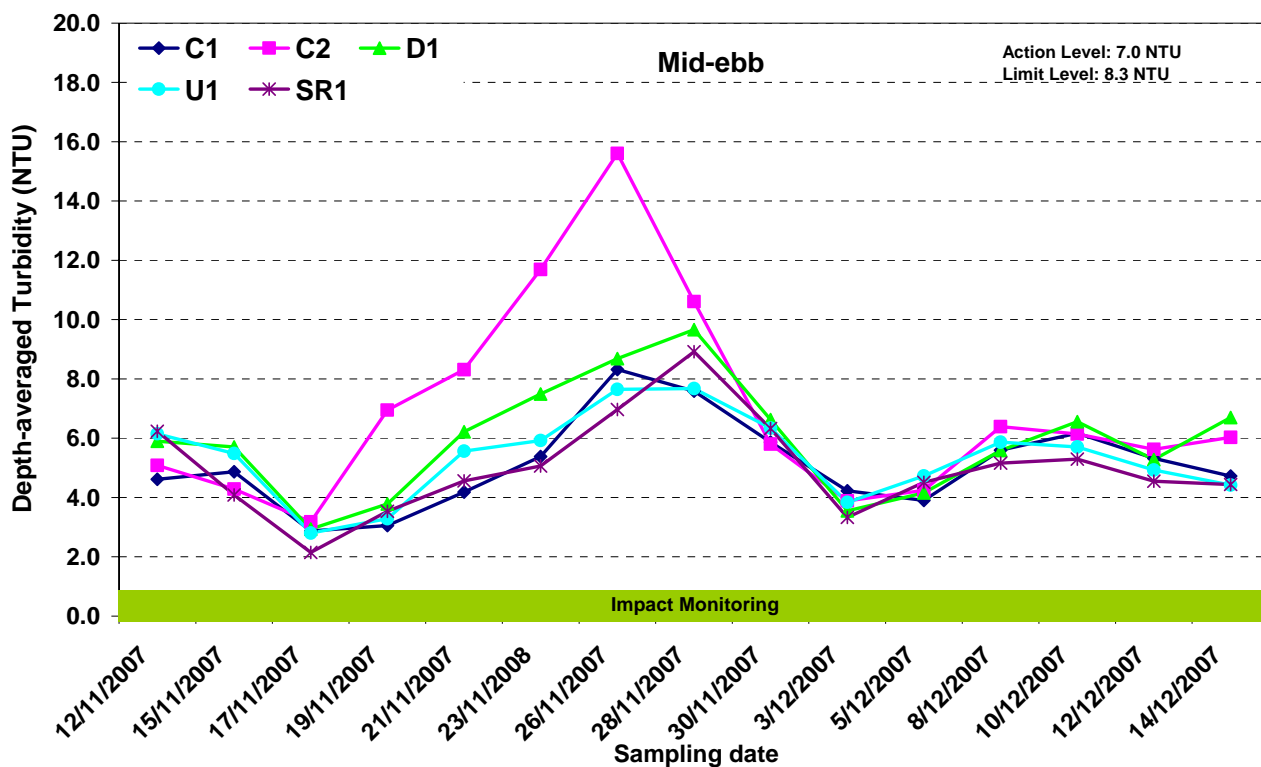


Figure E3 Depth-averaged turbidity (NTU) of water samples from the five sampling locations at mid-ebb and mid-flood between 10 December and 16 December 2007, and previous monitoring period between 12 November and 8 December 2007

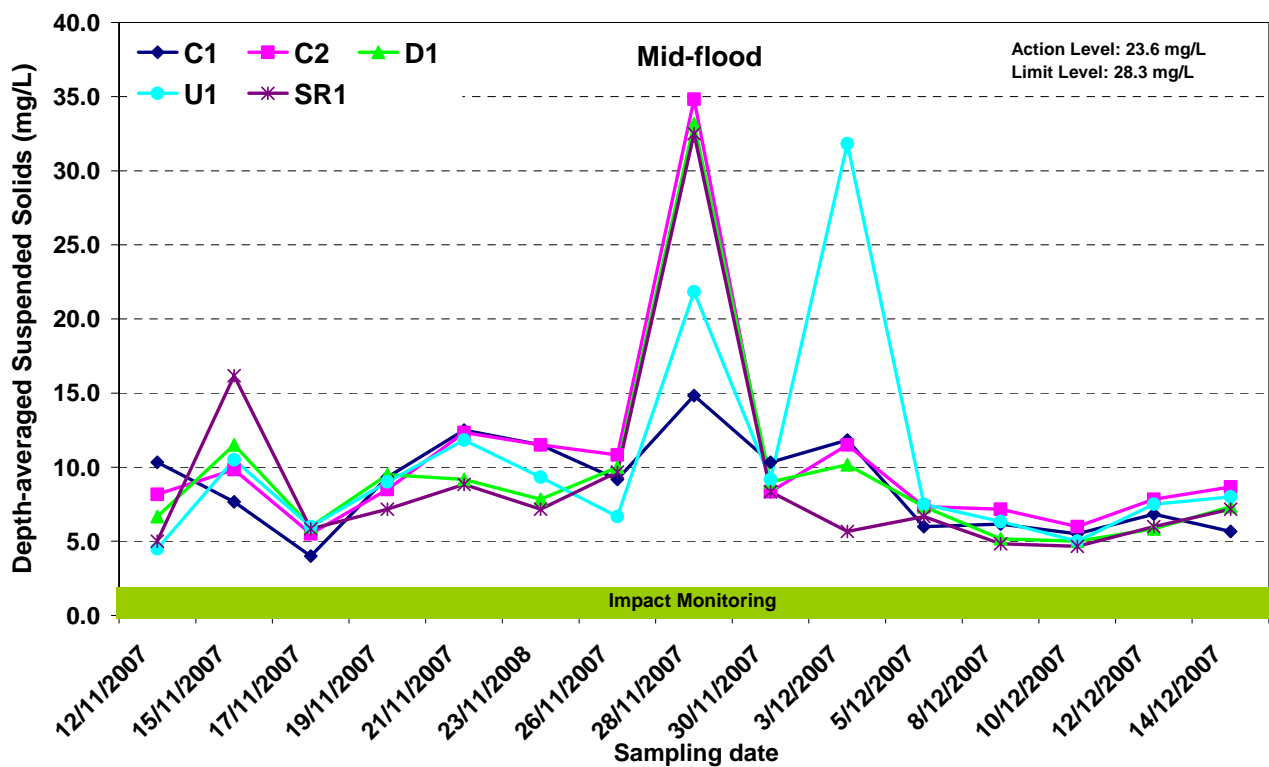
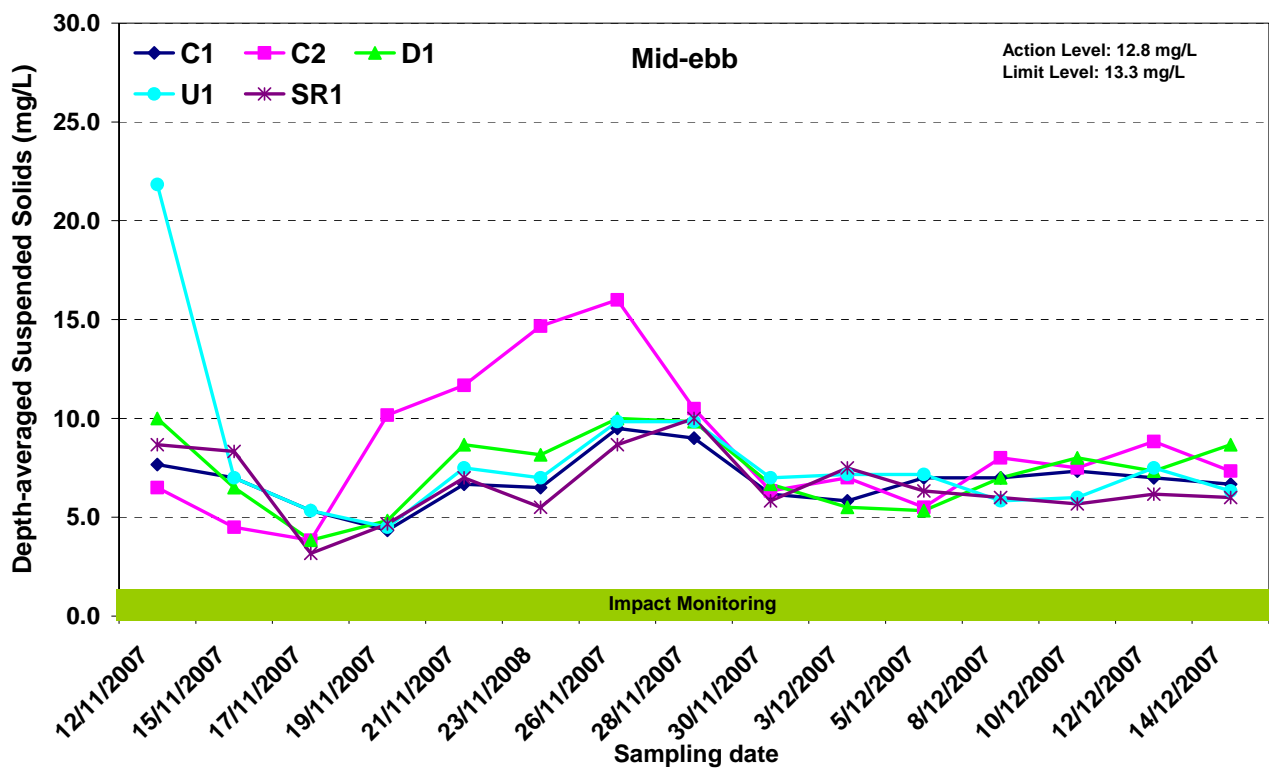


Figure E4 Depth-averaged suspended solids concentration (mg/L) of water samples from the five sampling locations at mid-ebb and mid-flood between 10 December and 16 December 2007, and previous monitoring period between 12 November and 8 December 2007



Annex E1 - Water Quality Results, Action and Limit Levels at mid-ebb tide for 10 December 2007

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/10/2007 | | | | | | | | | |
| Station | C1 | | | | | | | | | |
| Time (hh:mm) | 12:03 - 12:07 | | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 8.20 | | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.00 | | 7.10 | | | | | |
| Tide | Mid-Ebb | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.5 | 20.5 | 20.4 | 20.4 | 20.4 | 20.4 | | | 20.44 | - |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.00 | - | | |
| pH | 7.9 | 7.9 | 7.8 | 7.8 | 7.8 | 7.8 | 7.84 | - | | |
| D.O. Saturation (%) | 97.9 | 97.2 | 96.8 | 96.8 | 97.4 | 97.2 | 97.20 | - | | |
| D.O. (mg/L) | 7.30 | 7.25 | 7.23 | 7.23 | 7.28 | 7.27 | 7.26 | 7.28 | | |
| Turbidity (NTU) | 5.46 | 5.46 | 6.27 | 5.97 | 6.58 | 7.29 | 6.17 | - | | |
| SS (mg/L) | 6.0 | 6.0 | 7.0 | 7.0 | 8.0 | 10.0 | 7.33 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/10/2007 | | | | | | | | | |
| Station | C2 | | | | | | | | | |
| Time (hh:mm) | 12:41 - 12:45 | | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 14.10 | | | | | | | | | |
| Monitoring Depth (m) | 1.20 | | 7.00 | | 13.00 | | | | | |
| Tide | Mid-Ebb | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.5 | 20.5 | 20.5 | 20.5 | 20.4 | 20.4 | | | 20.47 | - |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.1 | 32.04 | - | | |
| pH | 7.9 | 7.9 | 7.8 | 7.8 | 7.8 | 7.8 | 7.84 | - | | |
| D.O. Saturation (%) | 100.8 | 98.8 | 100.8 | 98.3 | 101.8 | 98.5 | 99.83 | - | | |
| D.O. (mg/L) | 7.51 | 7.36 | 7.52 | 7.33 | 7.60 | 7.35 | 7.45 | 7.48 | | |
| Turbidity (NTU) | 5.67 | 6.17 | 5.97 | 5.87 | 6.48 | 6.68 | 6.14 | - | | |
| SS (mg/L) | 7.0 | 6.0 | 7.0 | 8.0 | 9.0 | 8.0 | 7.50 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|----------------|--------|
| Date | 12/10/2007 | | | | | | | Depth-averaged | Bottom |
| Station | D1 | | | | | | | | |
| Time (hh:mm) | 12:31 - 12:34 | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 9.30 | | | | | | | | |
| Monitoring Depth (m) | 1.20 | | 4.70 | | 8.10 | | | | |
| Tide | Mid-Ebb | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | |
| Water Temperature (°C) | 20.5 | 20.6 | 20.5 | 20.5 | 20.5 | 20.5 | | | |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.03 | - | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.82 | - | |
| D.O. Saturation (%) | 97.4 | 97.0 | 97.9 | 96.9 | 99.6 | 97.4 | 97.69 | - | |
| D.O. (mg/L) | 7.26 | 7.23 | 7.30 | 7.23 | 7.43 | 7.26 | 7.29 | 7.35 | |
| Turbidity (NTU) | 6.38 | 6.27 | 6.27 | 6.78 | 6.68 | 6.98 | 6.56 | - | |
| SS (mg/L) | 7.0 | 7.0 | 7.0 | 10.0 | 10.0 | 7.0 | 8.00 | - | |
| Remarks | - | | | | | | | | |

Compliance with Action and Limit Level

| Parameter | Action Level | Limit Level | D1 | | U1 | | SR1 | |
|----------------------------|--------------|-------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level |
| DO (Bottom) | 5.3 | 2.0 | N | N | N | N | N | N |
| DO (Surface and Middle) | 5.2 | 4.0 | N | N | N | N | N | N |
| Turbidity (Depth-averaged) | 7.0 | 8.3 | N | N | N | N | N | N |
| SS (Depth-averaged) | 12.8 | 13.3 | N | N | N | N | N | N |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|
| Date | 12/10/2007 | | | | | | | |
| Station | U1 | | | | | | | |
| Time (hh:mm) | 12:51 - 13:30 | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 9.30 | | | | | | | |
| Monitoring Depth (m) | 1.30 | | 4.80 | | 8.30 | | | |
| Tide | Mid-Ebb | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.6 | 20.7 | 20.5 | 20.6 | 20.5 | 20.5 | 20.55 | - |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.1 | 32.1 | 32.03 | - |
| pH | 7.9 | 7.9 | 7.9 | 7.8 | 7.9 | 7.8 | 7.86 | - |
| D.O. Saturation (%) | 102.8 | 97.2 | 102.0 | 95.9 | 102.7 | 94.9 | 99.26 | - |
| D.O. (mg/L) | 7.65 | 7.23 | 7.61 | 7.15 | 7.66 | 7.08 | 7.40 | 7.37 |
| Turbidity (NTU) | 4.76 | 5.26 | 5.46 | 5.57 | 6.78 | 6.38 | 5.70 | - |
| SS (mg/L) | 5.0 | 5.0 | 5.0 | 6.0 | 8.0 | 7.0 | 6.00 | - |
| Remarks | - | | | | | | | |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|
| Date | 12/10/2007 | | | | | | | |
| Station | SR1 | | | | | | | |
| Time (hh:mm) | 12:14 - 12:17 | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 5.50 | | | | | | | |
| Monitoring Depth (m) | 1.30 | | 2.60 | | 4.20 | | | |
| Tide | Mid-Ebb | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.6 | 20.7 | 20.6 | 20.6 | 20.5 | 20.6 | 20.61 | - |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.03 | - |
| pH | 7.9 | 7.9 | 7.9 | 7.9 | 7.8 | 7.9 | 7.86 | - |
| D.O. Saturation (%) | 99.8 | 98.8 | 100.3 | 98.5 | 101.0 | 98.8 | 99.52 | - |
| D.O. (mg/L) | 7.43 | 7.34 | 7.46 | 7.33 | 7.53 | 7.36 | 7.41 | 7.45 |
| Turbidity (NTU) | 4.96 | 4.86 | 5.26 | 5.46 | 5.36 | 5.87 | 5.30 | - |
| SS (mg/L) | 5.0 | 4.0 | 7.0 | 5.0 | 6.0 | 7.0 | 5.67 | - |
| Remarks | - | | | | | | | |

Flow Tracking Data

| Position | Easting | Northing | Depth | Time | Speed | Direction | Date |
|----------|-----------|-----------|-------|--------|--------|-----------|----------|
| C1 | 814486.62 | 825365.87 | 8.5 | 133428 | 0 | 0 | 20071210 |
| C1 | 814529.71 | 825375.28 | 8.4 | 134003 | 0.1317 | 77.7 | 20071210 |
| C1 | 814574.36 | 825388.99 | 8.4 | 134542 | 0.1378 | 72.9 | 20071210 |
| C1 | 814616.1 | 825393.23 | 8.4 | 135047 | 0.1376 | 84.2 | 20071210 |

Annex E2 - Water Quality Results, Action and Limit Levels at mid-flood tide for 10 December 2007

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/10/2007 | | | | | | | | | |
| Station | C1 | | | | | | | | | |
| Time (hh:mm) | 17:07 - 17:10 | | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 8.10 | | | | | | | | | |
| Monitoring Depth (m) | 1.30 | 3.80 | | 7.20 | | | | | | |
| Tide | Mid-Flood | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.5 | 20.5 | 20.4 | 20.4 | 20.4 | 20.4 | | | 20.42 | - |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.02 | - | | |
| pH | 7.7 | 7.7 | 7.7 | 7.7 | 7.6 | 7.7 | 7.65 | - | | |
| D.O. Saturation (%) | 95.1 | 94.7 | 94.0 | 93.9 | 93.2 | 94.1 | 94.18 | - | | |
| D.O. (mg/L) | 7.10 | 7.07 | 7.02 | 7.01 | 6.97 | 7.04 | 7.04 | 7.01 | | |
| Turbidity (NTU) | 3.82 | 4.02 | 4.42 | 5.03 | 5.73 | 4.82 | 4.64 | - | | |
| SS (mg/L) | 4.0 | 4.0 | 6.0 | 5.0 | 8.0 | 6.0 | 5.50 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|----------------|--------|
| Date | 12/10/2007 | | | | | | | Depth-averaged | Bottom |
| Station | C2 | | | | | | | | |
| Time (hh:mm) | 18:09 - 18:15 | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 14.30 | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 7.10 | | 13.10 | | | | |
| Tide | Mid-Flood | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | |
| Water Temperature (°C) | 20.4 | 20.4 | 20.4 | 20.4 | 20.4 | 20.4 | | | |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.02 | - | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.77 | - | |
| D.O. Saturation (%) | 93.9 | 94.3 | 93.2 | 94.0 | 94.1 | 95.7 | 94.21 | - | |
| D.O. (mg/L) | 7.02 | 7.05 | 6.97 | 7.03 | 7.04 | 7.16 | 7.05 | 7.10 | |
| Turbidity (NTU) | 4.22 | 3.82 | 4.92 | 5.63 | 6.53 | 6.33 | 5.24 | - | |
| SS (mg/L) | 4.0 | 5.0 | 6.0 | 6.0 | 7.0 | 8.0 | 6.00 | - | |
| Remarks | - | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/10/2007 | | | | | | | | | |
| Station | D1 | | | | | | | | | |
| Time (hh:mm) | 17:42 - 17:45 | | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 9.50 | | | | | | | | | |
| Monitoring Depth (m) | 1.20 | 4.70 | | 8.00 | | | | | | |
| Tide | Mid-Flood | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.6 | 20.7 | 20.4 | 20.4 | 20.4 | 20.4 | | | 20.49 | - |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.02 | - | | |
| pH | 7.7 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.73 | - | | |
| D.O. Saturation (%) | 96.0 | 96.9 | 94.8 | 94.8 | 95.6 | 95.6 | 95.62 | - | | |
| D.O. (mg/L) | 7.15 | 7.20 | 7.09 | 7.09 | 7.14 | 7.14 | 7.14 | 7.14 | | |
| Turbidity (NTU) | 3.22 | 2.91 | 4.22 | 3.92 | 5.03 | 4.72 | 4.00 | - | | |
| SS (mg/L) | 4.0 | 6.0 | 4.0 | 4.0 | 5.0 | 7.0 | 5.00 | - | | |
| Remarks | - | | | | | | | | | |

Compliance with Action and Limit Level

| Parameter | Action Level | Limit Level | D1 | | U1 | | SR1 | |
|----------------------------|--------------|-------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level |
| DO (Bottom) | 5.5 | 2.0 | N | N | N | N | N | N |
| DO (Depth-averaged) | 5.5 | 4.0 | N | N | N | N | N | N |
| Turbidity (Depth-averaged) | 14.8 | 18.9 | N | N | N | N | N | N |
| SS (Depth-averaged) | 23.6 | 28.3 | N | N | N | N | N | N |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|
| Date | 12/10/2007 | | | | | | | |
| Station | U1 | | | | | | | |
| Time (hh:mm) | 17:34 - 17:37 | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 9.70 | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.50 | | 8.20 | | | |
| Tide | Mid-Flood | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | |
| Water Temperature (°C) | 20.5 | 20.5 | 20.4 | 20.4 | 20.4 | 20.4 | 20.43 | - |
| Salinity (ppt) | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.0 | 32.01 | - |
| pH | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.73 | - |
| D.O. Saturation (%) | 96.9 | 96.5 | 95.9 | 95.5 | 96.5 | 96.2 | 96.24 | - |
| D.O. (mg/L) | 7.22 | 7.20 | 7.17 | 7.14 | 7.21 | 7.19 | 7.19 | 7.20 |
| Turbidity (NTU) | 3.22 | 3.12 | 3.82 | 3.82 | 5.13 | 3.72 | 3.81 | - |
| SS (mg/L) | 6.0 | 3.0 | 4.0 | 4.0 | 9.0 | 4.0 | 5.00 | - |
| Remarks | - | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/10/2007 | | | | | | | | | |
| Station | SR1 | | | | | | | | | |
| Time (hh:mm) | 17:24 - 17:29 | | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 5.70 | | | | | | | | | |
| Monitoring Depth (m) | 1.20 | | 2.70 | | 4.10 | | | | | |
| Tide | Mid-Flood | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.7 | 21.0 | 20.7 | 20.8 | 20.6 | 20.6 | | | 20.74 | - |
| Salinity (ppt) | 32.0 | 32.1 | 32.0 | 32.1 | 32.0 | 32.0 | 32.04 | - | | |
| pH | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.72 | - | | |
| D.O. Saturation (%) | 98.0 | 99.9 | 98.2 | 99.0 | 97.9 | 100.6 | 98.94 | - | | |
| D.O. (mg/L) | 7.28 | 7.38 | 7.30 | 7.35 | 7.29 | 7.48 | 7.35 | 7.39 | | |
| Turbidity (NTU) | 3.92 | 3.12 | 4.42 | 3.62 | 5.03 | 3.72 | 3.97 | - | | |
| SS (mg/L) | 5.0 | 4.0 | 5.0 | 4.0 | 6.0 | 4.0 | 4.67 | - | | |
| Remarks | - | | | | | | | | | |

Flow Tracking Data

| Position | Easting | Northing | Depth | Time | Speed | Direction | Date |
|----------|-----------|-----------|-------|--------|--------|-----------|----------|
| C1 | 814486.11 | 825371.36 | 9.1 | 182345 | 0 | 0 | 20071210 |
| C1 | 814375.22 | 825376.88 | 9.1 | 182910 | 0.3416 | 272.8 | 20071210 |
| C1 | 814263.13 | 825390.9 | 9.1 | 183431 | 0.3519 | 277.1 | 20071210 |
| C1 | 814149.16 | 825393 | 9.1 | 183951 | 0.3562 | 271.1 | 20071210 |

Annex E3 - Water Quality Results, Action and Limit Levels at mid-ebb tide for 12 December 2007

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|--------|------|----------------|--------|
| Date | 12/12/2007 | | | | | | | | | |
| Station | C1 | | | | | | | | | |
| Time (hh:mm) | 13:02 - 13:08 | | | | | | | | | |
| Ambient Temperature (°C) | 24 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 8.10 | | | | | | | | | |
| Monitoring Depth (m) | 1.20 | | 4.30 | | 7.20 | | | | | |
| Tide | Mid-Ebb | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 21.0 | 20.8 | 20.6 | 20.6 | 20.7 | 20.7 | | | 20.71 | - |
| Salinity (ppt) | 31.2 | 31.2 | 31.4 | 31.5 | 31.7 | 31.7 | 31.45 | - | | |
| pH | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.71 | - | | |
| D.O. Saturation (%) | 100.2 | 104.3 | 99.9 | 104.7 | 99.9 | 105.5 | 102.40 | - | | |
| D.O. (mg/L) | 7.44 | 7.77 | 7.47 | 7.82 | 7.44 | 7.86 | 7.63 | 7.65 | | |
| Turbidity (NTU) | 4.62 | 4.82 | 4.92 | 5.33 | 6.03 | 6.23 | 5.33 | - | | |
| SS (mg/L) | 8.0 | 6.0 | 6.0 | 7.0 | 8.0 | 7.0 | 7.00 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|--------|------|----------------|--------|
| Date | 12/12/2007 | | | | | | | | | |
| Station | C2 | | | | | | | | | |
| Time (hh:mm) | 13:47 - 13:55 | | | | | | | | | |
| Ambient Temperature (°C) | 24 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 13.70 | | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 6.80 | | 12.30 | | | | | |
| Tide | Mid-Ebb | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 21.0 | 20.8 | 20.7 | 20.8 | 20.7 | 20.7 | | | 20.77 | - |
| Salinity (ppt) | 31.4 | 31.4 | 31.5 | 31.4 | 31.6 | 31.6 | 31.50 | - | | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.80 | - | | |
| D.O. Saturation (%) | 107.8 | 107.8 | 108.3 | 110.5 | 110.2 | 112.6 | 109.54 | - | | |
| D.O. (mg/L) | 8.00 | 8.02 | 8.08 | 8.23 | 8.21 | 8.39 | 8.16 | 8.30 | | |
| Turbidity (NTU) | 4.72 | 4.72 | 5.93 | 5.63 | 6.43 | 6.33 | 5.63 | - | | |
| SS (mg/L) | 6.0 | 10.0 | 9.0 | 7.0 | 7.0 | 14.0 | 8.83 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|
| Date | 12/12/2007 | | | | | | | |
| Station | D1 | | | | | | | |
| Time (hh:mm) | 13:35 - 13:38 | | | | | | | |
| Ambient Temperature (°C) | 24 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 9.20 | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.10 | | 7.10 | | | |
| Tide | Mid-Ebb | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom |
| Water Temperature (°C) | 21.0 | 21.0 | 21.0 | 21.0 | 20.8 | 20.9 | 20.93 | - |
| Salinity (ppt) | 31.5 | 31.4 | 31.5 | 31.5 | 31.5 | 31.5 | 31.48 | - |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.80 | - |
| D.O. Saturation (%) | 108.7 | 105.9 | 109.7 | 106.9 | 110.9 | 107.4 | 108.25 | - |
| D.O. (mg/L) | 8.06 | 7.86 | 8.14 | 7.93 | 8.25 | 7.98 | 8.04 | 8.12 |
| Turbidity (NTU) | 4.32 | 5.13 | 5.23 | 5.53 | 5.43 | 6.03 | 5.28 | - |
| SS (mg/L) | 5.0 | 13.0 | 7.0 | 6.0 | 6.0 | 7.0 | 7.33 | - |
| Remarks | | | | | | | - | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|--|
| Date | 12/12/2007 | | | | | | | | |
| Station | U1 | | | | | | | | |
| Time (hh:mm) | 13:26 - 13:29 | | | | | | | | |
| Ambient Temperature (°C) | 24 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 9.10 | | | | | | | | |
| Monitoring Depth (m) | 1.00 | | 4.00 | | 7.10 | | | | |
| Tide | Mid-Ebb | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom | |
| Water Temperature (°C) | 20.8 | 20.9 | 20.7 | 20.8 | 20.7 | 20.7 | 20.76 | - | |
| Salinity (ppt) | 31.4 | 31.4 | 31.4 | 31.4 | 31.5 | 31.5 | 31.42 | - | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.78 | - | |
| D.O. Saturation (%) | 109.1 | 106.7 | 111.4 | 108.2 | 113.6 | 108.6 | 109.60 | - | |
| D.O. (mg/L) | 8.12 | 7.94 | 8.30 | 8.06 | 8.47 | 8.10 | 8.17 | 8.29 | |
| Turbidity (NTU) | 4.82 | 5.23 | 5.03 | 4.82 | 5.13 | 4.52 | 4.93 | - | |
| SS (mg/L) | 7.0 | 6.0 | 8.0 | 7.0 | 7.0 | 10.0 | 7.50 | - | |
| Remarks | - | | | | | | | | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|--|
| Date | 12/12/2007 | | | | | | | | |
| Station | SR1 | | | | | | | | |
| Time (hh:mm) | 13:17 - 13:21 | | | | | | | | |
| Ambient Temperature (°C) | 24 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 5.20 | | | | | | | | |
| Monitoring Depth (m) | 1.20 | | 2.60 | | 4.10 | | | | |
| Tide | Mid-Ebb | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom | |
| Water Temperature (°C) | 21.0 | 21.1 | 21.0 | 21.0 | 21.0 | 21.0 | 21.00 | - | |
| Salinity (ppt) | 31.3 | 31.3 | 31.3 | 31.3 | 31.4 | 31.3 | 31.33 | - | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.77 | - | |
| D.O. Saturation (%) | 107.7 | 106.1 | 109.4 | 107.3 | 111.1 | 107.9 | 108.23 | - | |
| D.O. (mg/L) | 7.99 | 7.87 | 8.12 | 7.96 | 8.25 | 8.01 | 8.03 | 8.13 | |
| Turbidity (NTU) | 4.42 | 4.52 | 4.52 | 4.52 | 4.82 | 4.52 | 4.55 | - | |
| SS (mg/L) | 6.0 | 8.0 | 5.0 | 5.0 | 9.0 | 4.0 | 6.17 | - | |
| Remarks | - | | | | | | | | |

Flow Tracking Data

| Position | Easting | Northing | Depth | Time | Speed | Direction | Date |
|----------|-----------|-----------|-------|--------|--------|-----------|----------|
| C1 | 814520.42 | 825379.45 | 8.6 | 140625 | 0 | 0 | 20071212 |
| C1 | 814540.62 | 825386.64 | 8.6 | 141227 | 0.0592 | 70.4 | 20071212 |
| C1 | 814588.92 | 825397.53 | 8.6 | 141733 | 0.1618 | 77.3 | 20071212 |
| C1 | 814628.97 | 825398.47 | 8.6 | 142359 | 0.1038 | 88.7 | 20071212 |

Compliance with Action and Limit Level

| Parameter | Action Level | Limit Level | D1 | | U1 | | SR1 | |
|----------------------------|--------------|-------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level |
| DO (Bottom) | 5.3 | 2.0 | N | N | N | N | N | N |
| DO (Surface and Middle) | 5.2 | 4.0 | N | N | N | N | N | N |
| Turbidity (Depth-averaged) | 7.0 | 8.3 | N | N | N | N | N | N |
| SS (Depth-averaged) | 12.8 | 13.3 | N | N | N | N | N | N |

Annex E4 - Water Quality Results, Action and Limit Levels at mid-flood tide for 12 December 2007

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/12/2007 | | | | | | | | | |
| Station | C1 | | | | | | | | | |
| Time (hh:mm) | 18:31 - 18:37 | | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 8.50 | | | | | | | | | |
| Monitoring Depth (m) | 1.20 | 4.10 | | 7.10 | | | | | | |
| Tide | Mid-Flood | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.9 | 20.8 | 20.8 | 20.8 | 20.8 | 20.7 | | | 20.80 | - |
| Salinity (ppt) | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.4 | 31.39 | - | | |
| pH | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.68 | - | | |
| D.O. Saturation (%) | 94.3 | 94.2 | 93.7 | 94.1 | 94.1 | 94.6 | 94.15 | - | | |
| D.O. (mg/L) | 7.01 | 7.01 | 6.98 | 7.00 | 7.01 | 7.05 | 7.01 | 7.03 | | |
| Turbidity (NTU) | 4.34 | 4.65 | 6.16 | 3.94 | 9.19 | 4.85 | 5.52 | - | | |
| SS (mg/L) | 8.0 | 6.0 | 7.0 | 5.0 | 9.0 | 6.0 | 6.83 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/12/2007 | | | | | | | | | |
| Station | C2 | | | | | | | | | |
| Time (hh:mm) | 19:13 - 19:21 | | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 14.20 | | | | | | | | | |
| Monitoring Depth (m) | 0.90 | | 7.10 | | 13.00 | | | | | |
| Tide | Mid-Flood | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.7 | 20.7 | 20.8 | 20.7 | 20.8 | 20.8 | | | 20.73 | - |
| Salinity (ppt) | 31.3 | 31.3 | 31.4 | 31.4 | 31.5 | 31.4 | 31.37 | - | | |
| | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.79 | | | |
| D.O. Saturation (%) | 93.3 | 93.8 | 93.0 | 93.4 | 94.4 | 93.3 | 93.54 | - | | |
| D.O. (mg/L) | 6.97 | 7.00 | 6.93 | 6.96 | 7.03 | 6.95 | 6.97 | 6.99 | | |
| Turbidity (NTU) | 4.65 | 4.44 | 6.97 | 4.95 | 7.07 | 7.47 | 5.93 | | | |
| SS (mg/L) | 8.0 | 5.0 | 8.0 | 9.0 | 8.0 | 9.0 | 7.83 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|--|
| Date | 12/12/2007 | | | | | | | | |
| Station | D1 | | | | | | | | |
| Time (hh:mm) | 19:01 - 19:05 | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 9.40 | | | | | | | | |
| Monitoring Depth (m) | 1.20 | | 4.50 | | 8.10 | | | | |
| Tide | Mid-Flood | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom | |
| Water Temperature (°C) | 20.7 | 20.8 | 20.9 | 20.8 | 20.9 | 20.9 | 20.84 | - | |
| Salinity (ppt) | 31.3 | 31.3 | 31.4 | 31.3 | 31.4 | 31.4 | 31.35 | - | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.78 | - | |
| D.O. Saturation (%) | 94.5 | 94.3 | 94.3 | 93.9 | 95.2 | 93.9 | 94.34 | - | |
| D.O. (mg/L) | 7.05 | 7.03 | 7.00 | 7.00 | 7.07 | 6.98 | 7.02 | 7.03 | |
| Turbidity (NTU) | 3.94 | 4.14 | 5.56 | 4.44 | 6.77 | 6.46 | 5.22 | - | |
| SS (mg/L) | 5.0 | 5.0 | 5.0 | 7.0 | 8.0 | 5.0 | 5.83 | - | |
| Remarks | - | | | | | | | | |

Compliance with Action and Limit Level

| Parameter | Action Level | Limit Level | D1 | | U1 | | SR1 | |
|----------------------------|--------------|-------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level |
| DO (Bottom) | 5.5 | 2.0 | N | N | N | N | N | N |
| DO (Depth-averaged) | 5.5 | 4.0 | N | N | N | N | N | N |
| Turbidity (Depth-averaged) | 14.8 | 18.9 | N | N | N | N | N | N |
| SS (Depth-averaged) | 23.6 | 28.3 | N | N | N | N | N | N |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|
| Date | 12/12/2007 | | | | | | | |
| Station | U1 | | | | | | | |
| Time (hh:mm) | 18:51 - 18:57 | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 9.50 | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.60 | | 8.00 | | | |
| Tide | Mid-Flood | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | |
| Water Temperature (°C) | 20.8 | 20.8 | 20.8 | 20.8 | 20.8 | 20.8 | 20.78 | - |
| Salinity (ppt) | 31.4 | 31.3 | 31.4 | 31.3 | 31.5 | 31.4 | 31.36 | - |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.76 | - |
| D.O. Saturation (%) | 94.0 | 94.1 | 93.8 | 94.0 | 94.2 | 94.8 | 94.15 | - |
| D.O. (mg/L) | 7.00 | 7.01 | 6.98 | 7.00 | 7.02 | 7.06 | 7.01 | 7.04 |
| Turbidity (NTU) | 4.24 | 4.65 | 4.34 | 4.24 | 5.66 | 4.55 | 4.61 | - |
| SS (mg/L) | 7.0 | 4.0 | 6.0 | 10.0 | 10.0 | 8.0 | 7.50 | - |
| Remarks | - | | | | | | | |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|
| Date | 12/12/2007 | | | | | | | |
| Station | SR1 | | | | | | | |
| Time (hh:mm) | 18:44 - 18:47 | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 5.60 | | | | | | | |
| Monitoring Depth (m) | 1.20 | | 2.60 | | 4.00 | | | |
| Tide | Mid-Flood | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.8 | 21.0 | 20.9 | 21.1 | 21.0 | 21.0 | 20.97 | - |
| Salinity (ppt) | 31.2 | 31.3 | 31.3 | 31.4 | 31.4 | 31.4 | 31.31 | - |
| pH | 7.7 | 7.8 | 7.7 | 7.8 | 7.7 | 7.7 | 7.74 | - |
| D.O. Saturation (%) | 95.7 | 95.9 | 95.8 | 95.7 | 96.3 | 95.5 | 95.82 | - |
| D.O. (mg/L) | 7.13 | 7.13 | 7.12 | 7.09 | 7.14 | 7.08 | 7.12 | 7.11 |
| Turbidity (NTU) | 3.84 | 3.64 | 4.44 | 3.94 | 4.34 | 4.34 | 4.09 | - |
| SS (mg/L) | 7.0 | 4.0 | 6.0 | 5.0 | 8.0 | 6.0 | 6.00 | - |
| Remarks | - | | | | | | | |

Flow Tracking Data

| Position | Easting | Northing | Depth | Time | Speed | Direction | Date |
|----------|-----------|-----------|-------|--------|--------|-----------|----------|
| C1 | 814487.6 | 825363.98 | 15.3 | 193448 | 0 | 0 | 20071212 |
| C1 | 814387.28 | 825362.47 | 15.3 | 193937 | 0.3472 | 269.1 | 20071212 |
| C1 | 814283.22 | 825377.42 | 15.3 | 194450 | 0.3359 | 278.2 | 20071212 |
| C1 | 814187.42 | 825374.03 | 15.3 | 195011 | 0.2986 | 268 | 20071212 |

Annex E5 - Water Quality Results, Action and Limit Levels at mid-ebb tide for 14 December 2007

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/14/2007 | | | | | | | | | |
| Station | C1 | | | | | | | | | |
| Time (hh:mm) | 14:30 - 14:35 | | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 8.50 | | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.00 | | 7.00 | | | | | |
| Tide | Mid-Ebb | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.8 | 20.9 | 20.7 | 20.7 | 20.7 | 20.7 | | | 20.76 | - |
| Salinity (ppt) | 30.5 | 30.5 | 30.7 | 30.6 | 30.9 | 30.8 | 30.65 | - | | |
| pH | 7.6 | 7.7 | 7.6 | 7.7 | 7.5 | 7.7 | 7.62 | - | | |
| D.O. Saturation (%) | 93.6 | 95.2 | 92.8 | 94.3 | 93.8 | 95.5 | 94.20 | - | | |
| D.O. (mg/L) | 7.00 | 7.11 | 6.95 | 7.06 | 7.02 | 7.15 | 7.05 | 7.09 | | |
| Turbidity (NTU) | 4.52 | 4.52 | 4.52 | 4.82 | 5.23 | 4.72 | 4.72 | - | | |
| SS (mg/L) | 8.0 | 6.0 | 6.0 | 6.0 | 9.0 | 5.0 | 6.67 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/14/2007 | | | | | | | | | |
| Station | C2 | | | | | | | | | |
| Time (hh:mm) | 15:17 - 15:21 | | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 14.30 | | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 6.70 | | 12.00 | | | | | |
| Tide | Mid-Ebb | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.9 | 20.9 | 20.8 | 20.7 | 20.8 | 20.7 | | | 20.79 | - |
| Salinity (ppt) | 30.7 | 30.7 | 30.8 | 30.8 | 30.9 | 30.9 | 30.79 | - | | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.79 | - | | |
| D.O. Saturation (%) | 95.0 | 93.5 | 94.7 | 93.0 | 96.4 | 93.5 | 94.33 | - | | |
| D.O. (mg/L) | 7.09 | 6.98 | 7.08 | 6.95 | 7.20 | 6.99 | 7.05 | 7.10 | | |
| Turbidity (NTU) | 5.83 | 5.63 | 6.23 | 6.13 | 6.53 | 5.83 | 6.03 | - | | |
| SS (mg/L) | 6.0 | 6.0 | 8.0 | 7.0 | 11.0 | 6.0 | 7.33 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|
| Date | 12/14/2007 | | | | | | | |
| Station | D1 | | | | | | | |
| Time (hh:mm) | 15:26 - 15:32 | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 9.20 | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.70 | | 8.20 | | | |
| Tide | Mid-Ebb | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.9 | 20.9 | 20.8 | 20.9 | 20.8 | 20.8 | 20.86 | - |
| Salinity (ppt) | 30.6 | 30.6 | 30.6 | 30.6 | 30.7 | 30.7 | 30.66 | - |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.80 | - |
| D.O. Saturation (%) | 93.8 | 92.9 | 94.2 | 93.0 | 96.8 | 93.8 | 94.09 | - |
| D.O. (mg/L) | 7.01 | 6.94 | 7.04 | 6.94 | 7.23 | 7.00 | 7.03 | 7.12 |
| Turbidity (NTU) | 6.63 | 6.83 | 6.43 | 7.04 | 6.03 | 7.24 | 6.70 | - |
| SS (mg/L) | 10.0 | 9.0 | 8.0 | 9.0 | 9.0 | 7.0 | 8.67 | - |
| Remarks | - | | | | | | | |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|
| Date | 12/14/2007 | | | | | | | |
| Station | U1 | | | | | | | |
| Time (hh:mm) | 14:52 - 14:56 | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 9.10 | | | | | | | |
| Monitoring Depth (m) | 1.00 | | 4.10 | | 7.10 | | | |
| Tide | Mid-Ebb | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.9 | 20.9 | 20.8 | 20.9 | 20.8 | 20.8 | 20.87 | - |
| Salinity (ppt) | 30.6 | 30.6 | 30.7 | 30.7 | 30.7 | 30.7 | 30.64 | - |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.79 | - |
| D.O. Saturation (%) | 98.3 | 97.1 | 98.7 | 97.0 | 100.6 | 97.5 | 98.18 | - |
| D.O. (mg/L) | 7.33 | 7.25 | 7.37 | 7.25 | 7.51 | 7.28 | 7.33 | 7.40 |
| Turbidity (NTU) | 4.42 | 4.42 | 4.32 | 4.52 | 4.42 | 4.42 | 4.42 | - |
| SS (mg/L) | 5.0 | 7.0 | 6.0 | 5.0 | 8.0 | 7.0 | 6.33 | - |
| Remarks | - | | | | | | | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|--|
| Date | 12/14/2007 | | | | | | | | |
| Station | SR1 | | | | | | | | |
| Time (hh:mm) | 14:44 - 14:48 | | | | | | | | |
| Ambient Temperature (°C) | 21 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 5.30 | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 2.50 | | 4.00 | | | | |
| Tide | Mid-Ebb | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom | |
| Water Temperature (°C) | 21.1 | 21.1 | 21.1 | 21.2 | 21.1 | 21.2 | 21.13 | - | |
| Salinity (ppt) | 30.4 | 30.5 | 30.4 | 30.5 | 30.5 | 30.5 | 30.47 | - | |
| pH | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.8 | 7.78 | - | |
| D.O. Saturation (%) | 99.7 | 98.8 | 100.2 | 99.2 | 102.3 | 99.4 | 99.94 | - | |
| D.O. (mg/L) | 7.43 | 7.35 | 7.46 | 7.37 | 7.61 | 7.39 | 7.44 | 7.50 | |
| Turbidity (NTU) | 4.42 | 4.52 | 4.42 | 4.62 | 4.32 | 4.32 | 4.44 | - | |
| SS (mg/L) | 6.0 | 7.0 | 5.0 | 6.0 | 5.0 | 7.0 | 6.00 | - | |
| Remarks | - | | | | | | | | |

Flow Tracking Data

| Position | Easting | Northing | Depth | Time | Speed | Direction | Date |
|----------|-----------|-----------|-------|--------|--------|-----------|----------|
| C1 | 814497.62 | 825364.79 | -99 | 154106 | 0 | 0 | 20071214 |
| C1 | 814584.01 | 825357.71 | -99 | 154655 | 0.2484 | 94.7 | 20071214 |
| C1 | 814647.09 | 825357.5 | -99 | 155148 | 0.2153 | 90.2 | 20071214 |
| C1 | 814704.51 | 825341.82 | -99 | 155624 | 0.2157 | 105.3 | 20071214 |

Compliance with Action and Limit Level

| Parameter | Action Level | Limit Level | D1 | | U1 | | SR1 | |
|----------------------------|--------------|-------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level |
| DO (Bottom) | 5.3 | 2.0 | N | N | N | N | N | N |
| DO (Surface and Middle) | 5.2 | 4.0 | N | N | N | N | N | N |
| Turbidity (Depth-averaged) | 7.0 | 8.3 | N | N | N | N | N | N |
| SS (Depth-averaged) | 12.8 | 13.3 | N | N | N | N | N | N |

Annex E6 - Water Quality Results, Action and Limit Levels at mid-flood tide for 14 December 2007

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/14/2007 | | | | | | | | | |
| Station | C1 | | | | | | | | | |
| Time (hh:mm) | 20:01 - 20:06 | | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 8.90 | | | | | | | | | |
| Monitoring Depth (m) | 1.20 | 4.10 | | 7.10 | | | | | | |
| Tide | Mid-Flood | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.8 | 20.8 | 20.8 | 20.8 | 20.7 | 20.7 | | | 20.77 | - |
| Salinity (ppt) | 30.6 | 30.6 | 30.7 | 30.7 | 30.8 | 30.8 | 30.69 | - | | |
| pH | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.70 | - | | |
| D.O. Saturation (%) | 90.0 | 90.1 | 89.2 | 89.5 | 90.9 | 91.0 | 90.11 | - | | |
| D.O. (mg/L) | 6.73 | 6.74 | 6.67 | 6.69 | 6.80 | 6.81 | 6.74 | 6.81 | | |
| Turbidity (NTU) | 4.32 | 4.52 | 4.52 | 4.52 | 6.03 | 5.93 | 4.97 | - | | |
| SS (mg/L) | 5.0 | 4.0 | 6.0 | 6.0 | 6.0 | 7.0 | 5.67 | - | | |
| Remarks | - | | | | | | | | | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|----------------|--------|
| Date | 12/14/2007 | | | | | | | Depth-averaged | Bottom |
| Station | C2 | | | | | | | | |
| Time (hh:mm) | 20:50 - 20:58 | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 14.30 | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 7.00 | | 13.10 | | | | |
| Tide | Mid-Flood | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | |
| Water Temperature (°C) | 20.7 | 20.7 | 20.7 | 20.7 | 20.7 | 20.7 | | | |
| Salinity (ppt) | 30.8 | 30.8 | 30.8 | 30.8 | 30.8 | 30.8 | 30.80 | - | |
| | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.7 | 7.74 | - | |
| D.O. Saturation (%) | 87.9 | 87.9 | 87.9 | 87.9 | 87.6 | 88.2 | 87.88 | - | |
| D.O. (mg/L) | 6.58 | 6.58 | 6.58 | 6.58 | 6.56 | 6.60 | 6.58 | 6.58 | |
| Turbidity (NTU) | 5.63 | 5.23 | 5.23 | 5.23 | 5.83 | 6.13 | 5.55 | - | |
| SS (mg/L) | 6.0 | 13.0 | 8.0 | 7.0 | 7.0 | 11.0 | 8.67 | - | |
| Remarks | - | | | | | | | | |

| | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|--|
| Date | 12/14/2007 | | | | | | | | |
| Station | D1 | | | | | | | | |
| Time (hh:mm) | 20:35 - 20:42 | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | |
| Weather | Sunny | | | | | | | | |
| Water Depth (m) | 9.60 | | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.60 | | 8.10 | | | | |
| Tide | Mid-Flood | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom | |
| Water Temperature (°C) | 20.7 | 20.7 | 20.8 | 20.7 | 20.8 | 20.7 | 20.74 | - | |
| Salinity (ppt) | 30.7 | 30.7 | 30.7 | 30.8 | 30.8 | 30.8 | 30.73 | - | |
| pH | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.74 | - | |
| D.O. Saturation (%) | 91.6 | 89.4 | 89.3 | 88.3 | 91.2 | 88.3 | 89.67 | - | |
| D.O. (mg/L) | 6.86 | 6.70 | 6.68 | 6.61 | 6.82 | 6.60 | 6.71 | 6.71 | |
| Turbidity (NTU) | 4.72 | 4.52 | 6.13 | 5.03 | 6.53 | 5.43 | 5.39 | - | |
| SS (mg/L) | 6.0 | 6.0 | 7.0 | 6.0 | 11.0 | 8.0 | 7.33 | - | |
| Remarks | - | | | | | | | | |

Compliance with Action and Limit Level

| Parameter | Action Level | Limit Level | D1 | | U1 | | SR1 | |
|----------------------------|--------------|-------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | | | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level | Exceedance of Action Level | Exceedance of Limit Level |
| DO (Bottom) | 5.5 | 2.0 | N | N | N | N | N | N |
| DO (Depth-averaged) | 5.5 | 4.0 | N | N | N | N | N | N |
| Turbidity (Depth-averaged) | 14.8 | 18.9 | N | N | N | N | N | N |
| SS (Depth-averaged) | 23.6 | 28.3 | N | N | N | N | N | N |

| | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|----------------|--------|
| Date | 12/14/2007 | | | | | | | |
| Station | U1 | | | | | | | |
| Time (hh:mm) | 20:22 - 20:29 | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | |
| Weather | Sunny | | | | | | | |
| Water Depth (m) | 9.10 | | | | | | | |
| Monitoring Depth (m) | 1.10 | | 4.60 | | 8.00 | | | |
| Tide | Mid-Flood | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.7 | 20.7 | 20.7 | 20.7 | 20.7 | 20.7 | 20.73 | - |
| Salinity (ppt) | 30.7 | 30.7 | 30.8 | 30.7 | 30.8 | 30.8 | 30.73 | - |
| pH | 7.8 | 7.7 | 7.7 | 7.7 | 7.8 | 7.7 | 7.74 | - |
| D.O. Saturation (%) | 88.9 | 89.1 | 88.3 | 88.8 | 90.6 | 90.5 | 89.38 | - |
| D.O. (mg/L) | 6.65 | 6.67 | 6.61 | 6.65 | 6.78 | 6.77 | 6.69 | 6.78 |
| Turbidity (NTU) | 4.72 | 4.92 | 5.23 | 5.23 | 5.63 | 5.53 | 5.21 | - |
| SS (mg/L) | 7.0 | 6.0 | 9.0 | 12.0 | 7.0 | 7.0 | 8.00 | - |
| Remarks | - | | | | | | | |

| | | | | | | | | | | |
|--------------------------|---------------|---------|---------|---------|---------|---------|-------|------|----------------|--------|
| Date | 12/14/2007 | | | | | | | | | |
| Station | SR1 | | | | | | | | | |
| Time (hh:mm) | 20:13 - 20:18 | | | | | | | | | |
| Ambient Temperature (°C) | 19 | | | | | | | | | |
| Weather | Sunny | | | | | | | | | |
| Water Depth (m) | 5.90 | | | | | | | | | |
| Monitoring Depth (m) | 1.00 | | 2.50 | | 4.10 | | | | | |
| Tide | Mid-Flood | | | | | | | | | |
| Trial | Trial 1 | Trial 2 | Trial 1 | Trial 2 | Trial 1 | Trial 2 | | | Depth-averaged | Bottom |
| Water Temperature (°C) | 20.8 | 20.8 | 20.8 | 20.8 | 20.8 | 20.8 | | | 20.82 | - |
| Salinity (ppt) | 30.6 | 30.7 | 30.7 | 30.7 | 30.7 | 30.8 | 30.70 | - | | |
| pH | 7.8 | 7.8 | 7.7 | 7.7 | 7.7 | 7.7 | 7.74 | - | | |
| D.O. Saturation (%) | 90.5 | 89.0 | 90.2 | 88.5 | 92.1 | 90.6 | 90.11 | - | | |
| D.O. (mg/L) | 6.76 | 6.65 | 6.74 | 6.61 | 6.88 | 6.77 | 6.74 | 6.83 | | |
| Turbidity (NTU) | 5.13 | 4.92 | 5.63 | 5.53 | 5.63 | 5.83 | 5.45 | - | | |
| SS (mg/L) | 7.0 | 7.0 | 7.0 | 8.0 | 7.0 | 7.0 | 7.17 | - | | |
| Remarks | - | | | | | | | | | |

Flow Tracking Data

| Position | Easting | Northing | Depth | Time | Speed | Direction | Date |
|----------|-----------|-----------|-------|--------|--------|-----------|----------|
| C1 | 814491.82 | 825365.63 | 1.6 | 211022 | 0 | 0 | 20071214 |
| C1 | 814395.79 | 825359.53 | 1.6 | 211532 | 0.3104 | 266.4 | 20071214 |
| C1 | 814312.83 | 825375.57 | 1.6 | 212017 | 0.2965 | 280.9 | 20071214 |
| C1 | 814204.16 | 825370.06 | 1.6 | 212622 | 0.2981 | 267.1 | 20071214 |