The Hongkong Electric Co Ltd
香港電燈有限公司

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) ORDINANCE, CAP. 499

ENVIRONMENTAL PERMIT NO. EP-165/2003

LAMMA POWER STATION
NAVIGATION CHANNEL IMPROVEMENT

Report Title	Monthly EM&A Report (July 2003)
Date	11/08/2003
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EXECUTIVE SUMMARY

This is the second monthly Environmental Monitoring and Audit (EM&A) report for the Project "Lamma Navigation Channel Improvement" prepared by the Environmental Team (ET). This report presents the results of impact monitoring on marine water quality for the said project in July 2003.

Marine water quality monitoring was performed. The results were checked against the established Action/Limit (AL) levels. On-site audit was conducted once per week. The implementation status of the environmental mitigation measures, Event/Action Plan and environmental complaint handling procedures were also checked.

Construction Activities Undertaken

Construction activities for the project during the reporting month was dredging and dumping of dredged mud. The maximum hourly and daily dredging rates actually achieved by the contractors were within the limits specified in the latest dredging schedule.

Environmental Monitoring Works

Due to adverse weather condition, the marine water quality monitoring work on 24th July 2003 was rescheduled to 1st August 2003. Other than that, marine water monitoring was conducted as scheduled in the reporting month.

Water Quality

There were seventeen (17) cases of Action Level exceedance in the reporting month. All these cases were contributed by Dissolved Oxygen (Bottom). For these exceedances, comprehensive investigations have been carried out. It was found that similar measurement results were also obtained at the control stations during the monitoring periods. Moreover, all the measurement results were within the range of literature data collected by EPD (SM5-7 from 1997 to 2001). These suggested that the low measurement results might be due to background fluctuation. Hence, the exceedances were considered not related to dredging activities. No further action is required.

Site Environmental Audit

EPD officials from Water and Waste Management Group visited the dredging site on 3/7/2003. They took some photographs of the dredger and hopper barge. EPD officials of Water Policy & Planning Group inspected the water quality monitoring work on 11/7/2003. They also carried out in-situ measurement and took water samples for laboratory analysis for their own reference.

IEC conducted a site inspection on 3/7/2003. The inspection results given by IEC are attached in Appendix H.

Site audits were carried out on a weekly basis to monitor environmental issues on the construction site. The site conditions were generally satisfactory. All required mitigation measures were implemented.

Environmental Licensing and Permitting

Description	Permit No.	Valid Period		Issued To	Date of Issuance
		From	To		
Environmental Permit	EP-0165/2003	08/04/03	-	HEC	08/04/03
Construction Noise Permit	GW-UW0156-03	01/06/03	30/11/03	Contractor	23/05/03
Marine Dumping Permit	EP/MD/04-011	01/06/03	30/09/03	Contractor	22/05/03

Implementation Status of Environmental Mitigation Measures

Environmental mitigation measures for the construction activities as recommended in the EM&A manual were implemented in the reporting month.

Environmental Complaints

No complaint was received in the reporting month.

Future Key Issues

The future key issues to be considered in the coming month are as follows:

- to continue executing the preventive measures for avoiding noise exceedance and monitoring/ reviewing the noise performance;
- to ensure compliance with the CNP already obtained;
- to keep reviewing the monitoring results and to take necessary actions to ensure the seawater quality;
- to carry out routine inspection and necessary maintenance for the cage-type silt curtains.

Concluding Remarks

The environmental performance of the project was generally satisfactory.

1. INTRODUCTION

1.1 Background

The Environmental Team (hereinafter called the "ET") was formed within the Hongkong Electric Co. Ltd (HEC) to undertake Environmental Monitoring and Audit for "Lamma Power Station Navigation Channel Improvement" (hereinafter called the "Project"). Under the requirements of Clause 4 of Environmental Permit EP-165/2003, an EM&A programme for impact environmental monitoring is required to be implemented. In accordance with the EM&A Manual, environmental monitoring of water quality and regular environmental audits are required for the Project.

The Project involves restoring the depth of existing channel by dredging to a water depth of –16 mPD approximately with an estimated total dredging volume of 2.98 million m^3.

The Project Area is illustrated in Figure 1.1. The shaded area shows the region of the Channel where dredging will be required under this Project. According to the latest bathymetric survey of the Channel, there is already sufficient water depth in the remaining section of the Channel in the south (beyond the shaded area in Figure 1.1) and no dredging will be required.

The dredging options for the Project are:
(1) continuous dredging using grab dredgers with cage-type silt curtains or
(2) intermittent dredging using one Trailer Suction Hopper Dredger (TSHD).

Only one of these two dredging options will be deployed. The contractor has chosen to adopt the continuous dredging method using grab dredgers with cage-type silt curtains.

This report summarizes the environmental monitoring and audit work for the Project for the month of July 2003.

1.2 Project Organisation

The management structure to oversee the Project includes the following:

- Environmental Protection Department (The Authority);
- Chief Engineer (Projects) (The official contact person between HEC and EPD);
- Engineer;
- Independent Environmental Checker (IEC);
- Environmental Team (ET);
- Contractor.

The project organisation chart for the construction EM&A programme is shown in Appendix A.

1.3 Construction Works undertaken during the Reporting Month

Construction activities undertaken during the reporting month for this Project were dredging and dumping of dredged mud. The total volume of dredged materials from 1st to 31st July 2003 was 279,720m^3. Uncontaminated materials were dumped at the designated location within the East Ninepin Disposal Area and the total dumped volume in July 2003 was 279,720m^3. Figure 1.2 shows all dumping locations for this project. Daily records of dredged / dumped volume are presented in Appendix B. The maximum hourly and daily dredging rates actually achieved by the contractors were within the limits specified in the latest dredging schedule.

The main construction activities carried out during the reporting month and the corresponding environmental mitigation measures are summarized in Table 1.1. The implementation of major mitigation measures in the month is provided in Appendix I.

Table 1.1 Construction Activities and Their Corresponding Environmental Mitigation Measures

Construction Activities	**Environmental Mitigation Measures**
Dredging	**Water Quality** – Three number of grab dredgers with grab capacity of no less than 8m^3 were operated on site. – Both maximum total hourly and daily dredging rates specified in the latest dredging schedule were strictly followed. – Daily dredging volume was spread as evenly as possible over the 24-hour period. – Cage-type silt curtains were deployed for all grab dredgers. – Grabs were tightly closed and the hoist speed was suitably low. – All barges for transportation of dredged materials were fitted with tight bottom seals. **Noise** – General noise mitigation measures were employed at work site throughout the construction phase. – The number of dredgers and operation conditions as specified in the CNP were strictly followed. **Dredging Waste** – All vessels for marine transportation of dredged sediment were fitted with tight fitting seals at the bottom openings to prevent leakage. – All vessels were filled to a level such that dredged materials would not spill over during loading and transportation.

Construction Activities	Environmental Mitigation Measures
	– Dredged wastes were disposed of at Licensed dumping site – East Ninepin. – Records of the quantities of waste generated and disposed of off-site were taken. **Marine Ecology** – All construction related vessels approached the site from the designated route to avoid the Finless Porpoise habitat area. – The dumping of chemicals, rubbish, oils etc. into the water was strictly prohibited.

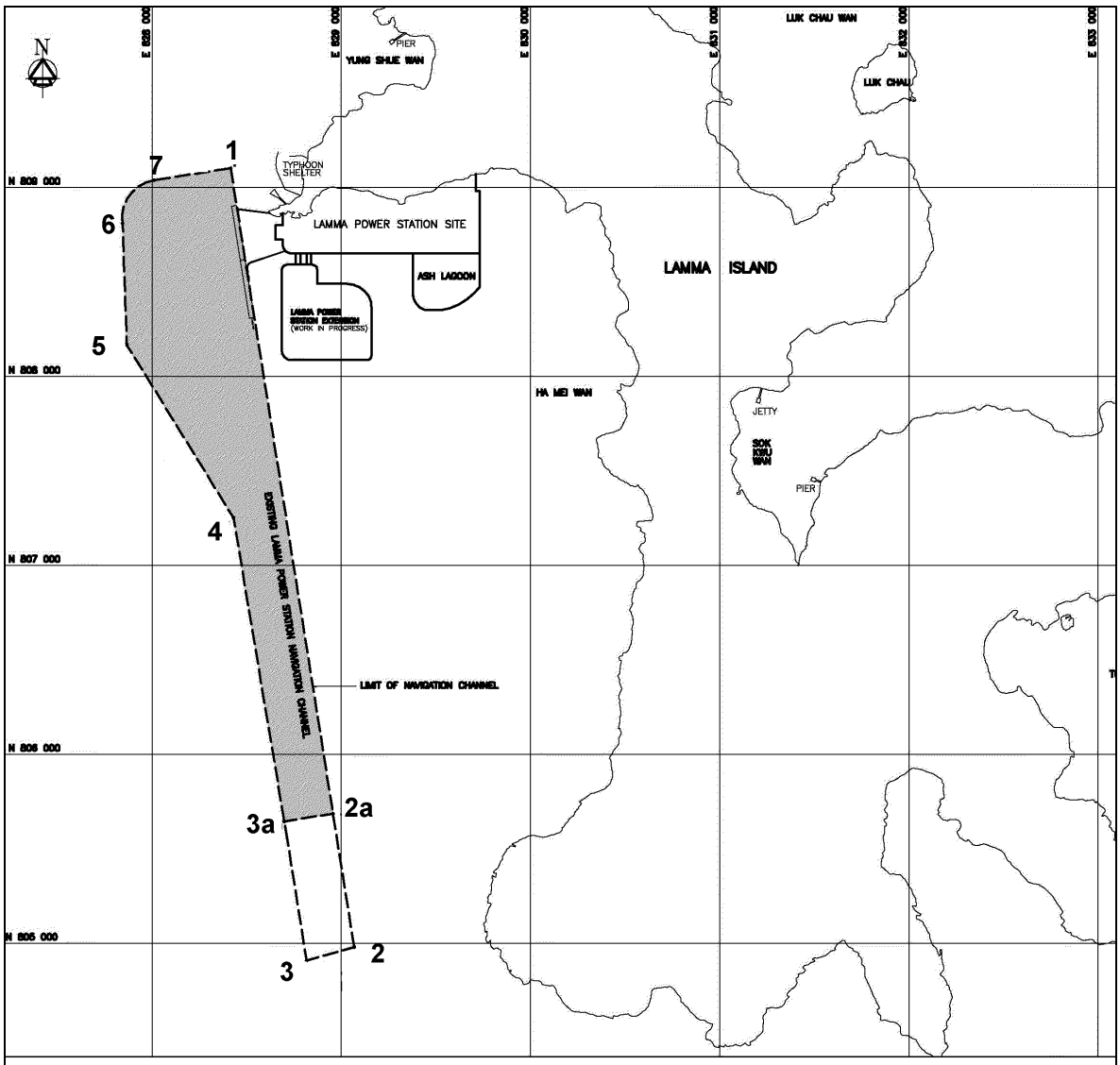
1.4 Summary of EM&A Requirements

The EM&A program requires environmental monitoring of water quality. Regular environmental site audits for water quality and waste management were carried out. The detailed EM&A monitoring work for water quality are described in Sections 2.

The following environmental audits are summarized in Section 3 of this report:

- Environmental monitoring results;
- Waste Management Records;
- Weekly site audit results;
- The status of environmental licensing and permits for the Project;
- The implementation status of environmental protection and pollution control/ mitigation measures.

Future key issues will be reported in Section 4 of this report.



SETTING OUT OF NAVIGATION CHANNEL LIMIT

POINT	EASTING (m)	NORTHING (m)
1	828 414.393	809 101.605
2	829 067.326	804 979.151
3	828 815.532	804 906.872
4	828 430.000	807 250.000
5	827 864.900	808 168.200
6	827 843.188	808 808.639
7	828 009.441	809 037.467

SETTING OUT OF POINT "2a" & "3a"

POINT	EASTING (m)	NORTHING (m)
2a	828 956.222	805 680.633
3a	828 704.149	805 608.273

Figure 1.1 Layout of Work Site

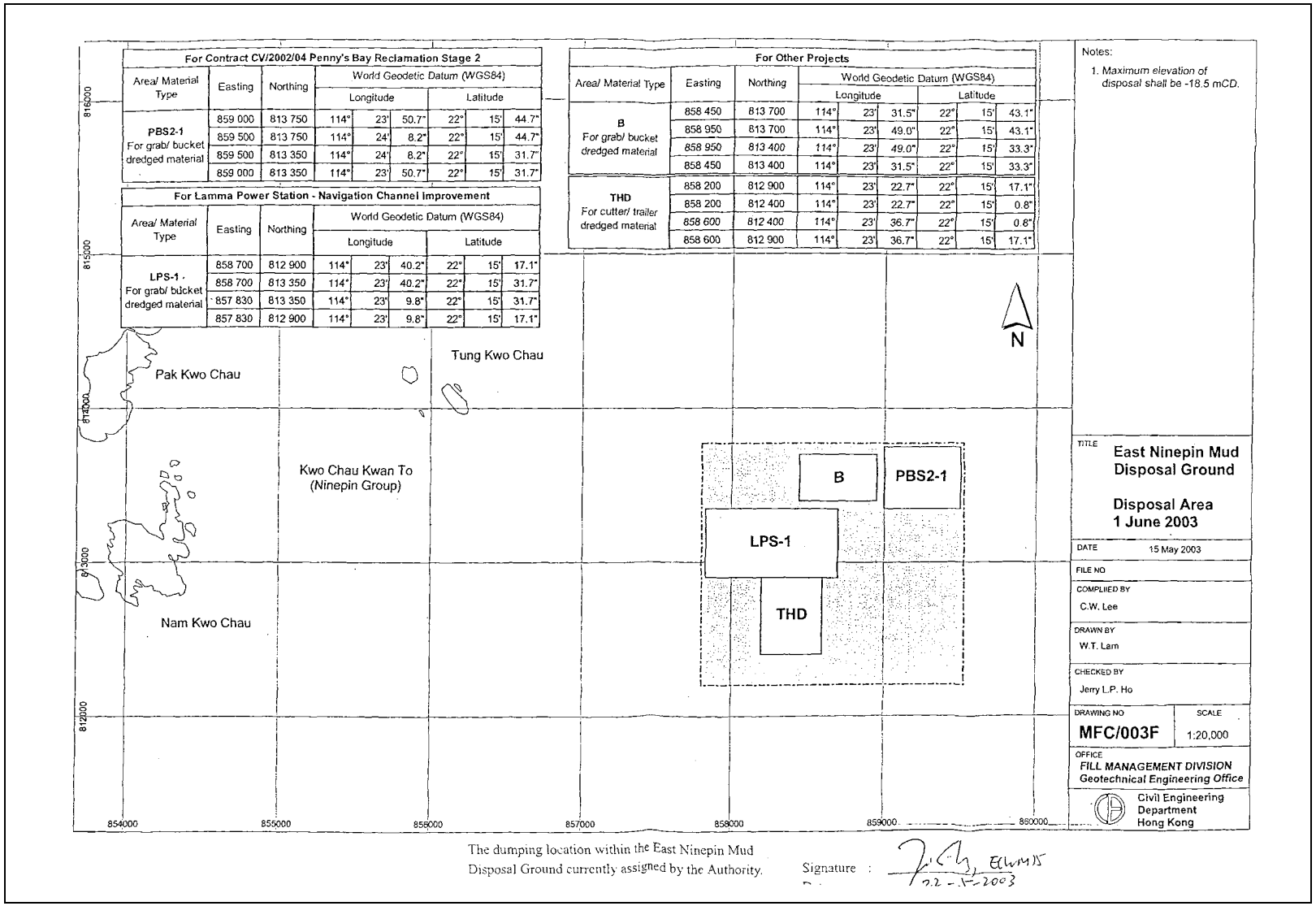


Figure 1.2 Location of Dumping Area

2. WATER QUALITY MONITORING

2.1 Monitoring Requirements

Marine water quality monitoring at the monitoring locations adjacent to the project area was carried out. The purpose was to ensure that deterioration of water quality, if any, would immediately be detected and that timely action could be taken to rectify the situation. The impact monitoring data were checked against the AL levels set out in the Baseline Monitoring Report (Revision 1).

2.2 Monitoring Locations

A total of 10 water quality monitoring locations were selected. 7 Sensitive Receiver (SR) stations were chosen on the basis of their proximity to the construction site. 3 Marine Control stations (CS) as recommended in the EIA were selected to facilitate comparison of the water quality of the SR stations with ambient water quality conditions. Table 2.1 describes the locations of these monitoring stations. Their locations are shown in Figure 2.1.

Table 2.1 Water Quality Monitoring Locations

Type	Monitoring Location	HK Metric Grid E	HK Metric Grid N
Sensitive Receiver Stations	SR6	830 150	811 500
	SR7	829 004	810 903
	SR10	829 194	808 600
	SR11	830 119	808 650
	SR12	830 386	807 189
	SR14	829 977	805 758
	SR15	829 566	804 545
Marine Control Stations	CS1	828 000	813 492
	CS2	825 000	808 000
	CS3	829 000	802 000

2.3 Monitoring Equipment

Table 2.2 summarizes the equipment used in the water-quality monitoring programme.

Table 2.2 Water Quality Monitoring Equipment

Equipment	Detection Limit
YSI 6920 Water Quality Monitor	Temperature: -5 to 45 ^{0}C; +/- 0.15 ^{0}C Salinity: 0 to 70 ppt; +/- 0.1 ppt Dissolved Oxygen: 0 to 200%; +/- 0.2% 0 to 20 mg/L; +/- 0.2 mg/L Turbidity: 0 to 1000 NTU; +/- 5% of the range pH: 0 to 14 units; +/- 0.2 units
Trimble NT300D GPS	Accuracy better than 3m
Eagle Fisheasy ST Portable Depth Finder	Accuracy better than 0.5m

2.4 Monitoring Parameters, Frequency and Duration

Table 2.3 summarizes the monitoring parameters, frequencies and total duration of water quality monitoring. The monitoring schedule for reporting month is shown in Appendix D.

Table 2.3 Water Quality Monitoring Parameters and Frequency

Monitoring Stations	Parameters	Frequency	No. of Depths	No. of Samples
Sensitive Receiver Stations SR6, SR7, SR10, SR11, SR12, SR14 & SR15 Marine Control Stations CS1, CS2, CS3	• Depth, m • Temperature, ^{o}C • Salinity, ppt • DO, mg/L • DO Saturation, % • Turbidity, NTU • SS, mg/L • pH	Three times per week	3 Surface, Mid-Depth and Bottom	2 Mid-ebb and Mid-flood

2.5 Monitoring Procedures and Calibration Details

Monitoring Procedures

- The monitoring stations were accessed using survey boat to within 3m, guided by Differential Global Positioning System (DGPS).
- The water depth of the monitoring location at sampling time was measured using depth meter. Afterwards, the probes of the in-situ measurement equipment were lowered to the predetermined depths and the measurements taken accordingly.
- A water sampler was lowered into the water to the required sampling depths. Upon reaching the pre-determined depth, a messenger to activate the sampler was released which travel down the wire. The water sample was sealed within the sampler before retrieving.
- All measurements were taken at 3 water depths where appropriate, namely 1m below water surface, mid-depth, and 1 meter from seabed, except where the water depth was less than 6m, whereupon the mid-depth measurement would be omitted. If the water depth was less than 3m, only the mid-depth position was monitored.
- One duplicate in-situ measurement and water sample for laboratory analyses were taken at all sampling locations.
- At each measurement depth, two consecutive measurements were taken. The probe was retrieved out of the water after the first measurement and then redeployed for the second measurement. When the difference in value between the first and second measurement of on-site parameters was more than 25% of the value of the first reading, the reading was discarded and further readings were taken.
- A water sampler, consisting of a transparent PVC or glass cylinder of not less than two litres which could be effectively sealed with cups at both ends, was used. 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.
- Water samples for SS measurements were transferred directly to high density polythene sample bottles, packed in ice (cooled to $4^{o}C$ without being frozen), and delivered to a HOKLAS laboratory as soon as possible after collection.
- In addition, field information such as the general meteorological conditions and observations regarding any significant activities in the vicinity of each monitoring location were also recorded.

Equipment Calibration

The equipment deployed for in-situ measurement of marine water quality was calibrated before use. The methodologies for the calibration follow the instruction manuals provided by the corresponding manufacturers. The calibration records are shown in Appendix F.

Laboratory Analysis & QA/QC

The collected marine water samples were analyzed for Suspended Solids with methodologies shown in Table 2.4.

Table 2.4 Laboratory Analysis Methodologies of Marine Water Samples

Parameter	**Method**	**Limit of Reporting (mg/L)**
Suspended Solids	APHA 17 ed 2540 D	1.0

In order to ensure that the laboratory analysis works were carried out properly, stringent QA/QC procedures (which include sample preparation as well as subsequent instrumentation analysis) were followed. According to the requirements stipulated in the EM&A Manual, QA/QC requirements for laboratory testing include:

1) "Blind" duplicate samples analysis of 10% collected marine water samples; and
2) in-house QA/QC procedures of the testing laboratory (this includes the use of blank, batch duplicates and quality control samples).

Blind Duplicate:
In order to cross check the accuracy of the measurement results by the laboratory analysis, “blind” duplicate samples of 10% of the collected marine water samples were analyzed alongside the normal samples. The sample codes for the “blind” duplicates were determined by the sampling team and are not identifiable by the laboratory. The results of the “blind” duplicate samples are summarized in Appendix F.

Blank:
A laboratory blank is an analyte free matrix to which all reagents are added in the same volumes or proportions as used in the standard sample preparation to monitor contamination introduced in laboratory. All the laboratory blank values and acceptance criterion of suspended solids are summarized in Appendix F.

Batch Duplicate:
Batch duplicate is an intra-laboratory split sample randomly selected from the sample batch to monitor the method precision in a given matrix. The acceptance limit of duplicate values of suspended solids and their duplicate results are summarized in Appendix F.

Quality Control Sample:
The quality control sample is the analysis of a material with a known concentration of contaminants to determine the accuracy of results in a given matrix. The results of quality control samples for suspended solids are shown in Appendix F.

A total of 1,440 sets of samples for Suspended Solids analysis were received during the marine monitoring period including both ebb and flood tides. At least 5% laboratory blanks, batch duplicates and quality control samples for Suspended Solids were used. The acceptance criteria are outlined in Quality Control data.

The QA/QC results in Appendix F indicated that the laboratory analysis works of the collected marine water samples were properly carried out and the measurement results obtained were valid in accordance with the Hong Kong Laboratory Accreditation Scheme (HOKLAS) requirements. Moreover, the "blind" duplicate measurement results indicated that the precision of the measurements for Suspended Solids complied with HOKLAS requirements.

2.6 Results and Observations

Due to adverse weather conditions, the marine water quality monitoring work on 24th July 2003 was rescheduled to 1st August 2003. Other than that, marine water monitoring was conducted as scheduled in the reporting month. All monitoring data and graphical presentation of the monitoring results are provided in Appendix E. Key findings and observations are provided in the following tables:

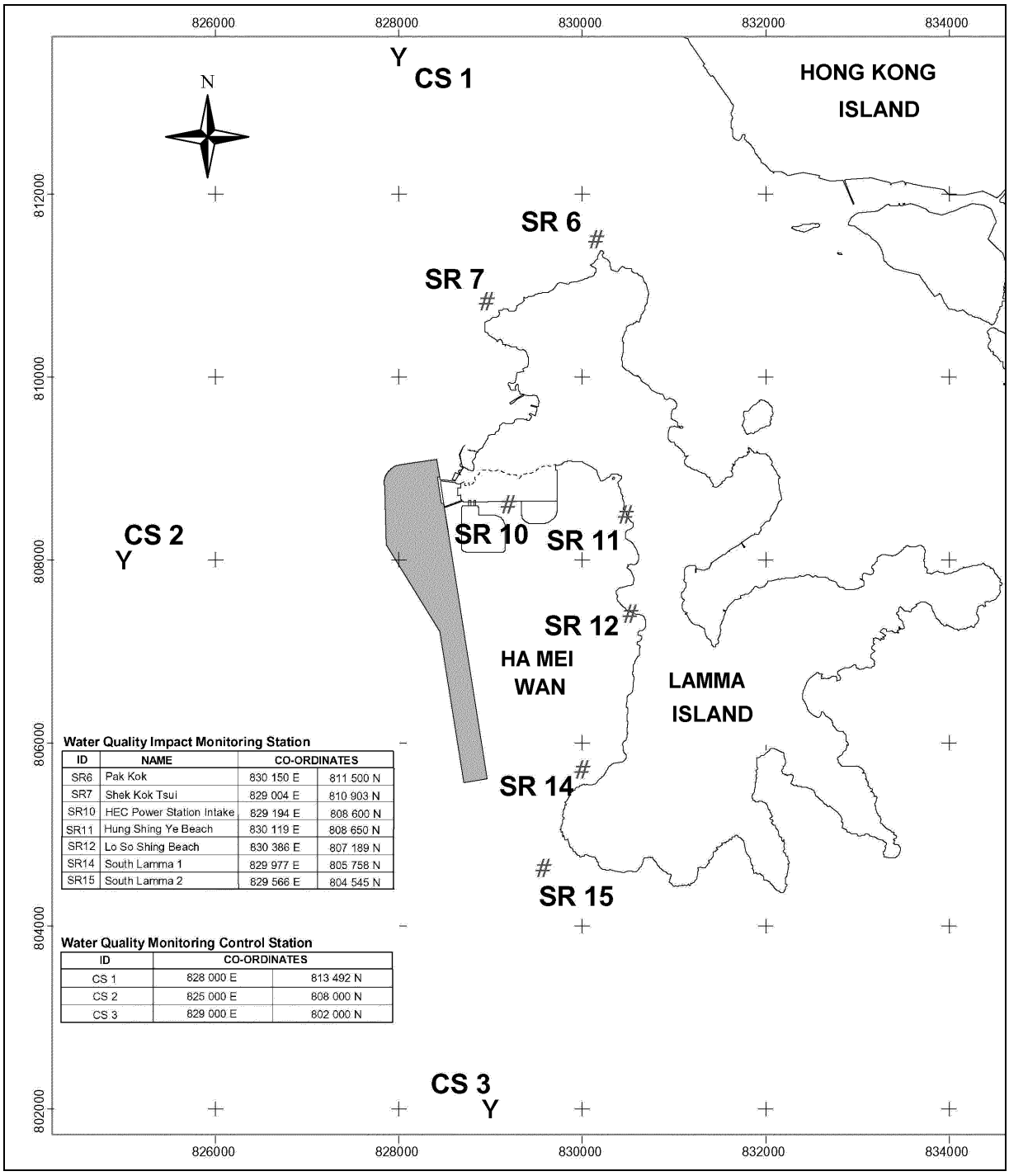
Summary of Exceedances in Dissolved Oxygen (Bottom) in July 2003

Monitoring Dates	Number of Exceedances		Investigation Findings (if any)
	Action Level	Limit Level	
2nd July	5 (SR15 during ebb tide and SR11, SR12, SR14 & SR15 during flood tide)	0	Judged not related to site activities. For the exceedance at SR15 during ebb tide, the measurement result was even higher than that of the upstream control station (viz. 2.5 mg/L). This suggested that the background DO was already low. For the exceedances during flood tide, the measurement results were within the range of literature data collected by EPD (SM5-7 from 1997 to 2001). Furthermore, it was found that the measurement results at all control stations were also lower than the Action Level of SR11-15 (viz. 3.5 mg/L). These suggested that the low DO measurement results might be due to background fluctuation.

Monitoring Dates	Number of Exceedances		Investigation Findings (if any)
	Action Level	Limit Level	
7th July	3 (SR15 during ebb tide and SR14 & SR15 during flood tide)	0	Judged not related to site activities. For the exceedance at SR15 during ebb tide, the measurement result was higher than that of its upstream control station (viz 2.8 mg/L). Also, for the exceedances at SR14 & SR15 during flood tide, the measurement results were not lower than that of their upstream control station (viz. 3.0 mg/L). These suggested that the background DO was already low.
9th July	1 (SR15 during ebb tide)	0	Judged not related to site activities. For the marginal exceedance at SR15 during ebb tide, the measurement result was within the range of literature data collected by EPD (SM5-7 from 1997 to 2001). Moreover, it was found that the measurement result at SR14 (4.0 mg/L), which is located upstream of SR15 and closer to the dredging area, was even higher than that of SR15. Furthermore, considering on the same sampling day during flood tide at CS3 (which is in upstream to the dredging site), the measurement result (3.3 mg/L) was also found to be lower than the Action Level of 3.5 mg/L. These suggested that the low DO measurement result might be due to background fluctuation.
11th July	2 (SR15 during ebb tide and flood tide)	0	Judged not related to site activities. For the exceedance at SR15 during flood tide, the measurement result at upstream control station (2.9 mg/L) was also found to be lower than the Action Level of 3.5 mg/L. This suggested that the background level of DO was already low. For the exceedance at SR15 during ebb tide, the measurement result was within the range of literature data collected by EPD (SM5-7 from 1997 to 2001). Moreover, it was found that the measurement result at SR14 (4.5 mg/L), which is located upstream of SR15 and closer to the dredging area, was even higher than the Action Level of 3.5 mg/L. Besides, as mentioned above, considering on the same sampling day during flood tide at CS3 (which is in upstream to the dredging site), the measurement result (2.9 mg/L) was also found to be lower than the Action Level of 3.5 mg/L. These suggested that the low measurement results might be due to background fluctuation.

Monitoring Dates	Number of Exceedances		Investigation Findings (if any)
	Action Level	Limit Level	
14th July	4 (SR15 during ebb tide and SR12, SR14 & SR15 during flood tide)	0	Judged not related to site activities. For the exceedances at SR15 during ebb tide and SR12 & SR14 during flood tide, the measurement results were found to be not lower than that of their upstream control stations. This suggested that the background level of DO was already low. For the exceedance at SR15 during flood tide, the measurement result was within the range of literature data collected by EPD (SM5-7 from 1997 to 2001). Moreover, the measurement result of its upstream control station was also found to be lower at the Action Level of 3.5 mg/L. These suggested that the low measurement results might be due to background fluctuation.
18th July	2 (SR15 during ebb tide and flood tide)	0	Judged not related to site activities. For the exceedance at SR15 during flood tide, the measurement result was found to be not lower than that of their upstream control stations. This suggested that the background level of DO was already low. For the exceedance at SR15 during ebb tide, the measurement result was within the range of literature data collected by EPD (SM5-7 from 1997 to 2001). Moreover, the measurement result of its upstream control station was also found to be lower at the Action Level of 3.5 mg/L. These suggested that the low measurement results might be due to background fluctuation.

There were seventeen (17) cases of Action Level exceedance in the reporting month. All these cases were contributed by Dissolved Oxygen (Bottom). For these exceedances, comprehensive investigations have been carried out. It was found that similar measurement results were also obtained at the control stations during the monitoring periods. Moreover, all the measurement results were within the range of literature data collected by EPD (SM5-7 from 1997 to 2001). These suggested that the low measurement results might be due to background fluctuation. Hence, the exceedances were considered not related to dredging activities. No further action is required. Nevertheless IEC, Engineer and the construction contractor have been informed of the exceedances accordingly as per requirements of the EM&A Manual.



Water Quality Impact Monitoring Station

ID	NAME	CO-ORDINATES	
SR6	Pak Kok	830 150 E	811 500 N
SR7	Shek Kok Tsui	829 004 E	810 903 N
SR10	HEC Power Station Intake	829 194 E	808 600 N
SR11	Hung Shing Ye Beach	830 119 E	808 650 N
SR12	Lo So Shing Beach	830 386 E	807 189 N
SR14	South Lamma 1	829 977 E	805 758 N
SR15	South Lamma 2	829 566 E	804 545 N

Water Quality Monitoring Control Station

ID	CO-ORDINATES	
CS 1	828 000 E	813 492 N
CS 2	825 000 E	808 000 N
CS 3	829 000 E	802 000 N

Figure 2.1 Location of Water Quality Monitoring Stations

3. ENVIRONMENTAL AUDIT

3.1 Review of Environmental Monitoring Procedures

The environmental monitoring procedures were regularly reviewed by the Environmental Team. No modification to the existing monitoring procedures was recommended.

3.2 Assessment of Environmental Monitoring Results

Monitoring results for Water Quality

The environmental monitoring results for Water Quality in the reporting month presented in Sections 2 are summarized in Table 3.1.

Table 3.1 Summary of AL Level Exceedances on Monitoring Parameters

Item	Parameter Monitored	Monitoring Period	No. of Exceedances In		Event/Action Plan Implementation Status and Results
			Action Level	Limit Level	
Water					
1	DO (Surface & Middle)	01/07/03-31/07/03	0	0	
2	DO (Bottom)	01/07/03-31/07/03	17	0	The exceedances were considered not related to the site activities. Please refer to section 2 of the report for details.
3	SS	01/07/03-31/07/03	0	0	
4	Turbidity	01/07/03-31/07/03	0	0	

Waste Management Records

The estimated amounts of different types of waste generated in July 2003 are shown in Table 3.2.

Table 3.2 Estimated Amounts of Waste Generated in July 2003

Waste Type	Examples	Estimated Amount (m^3)
Dredged Materials	Marine Mud	279,720

The total bulk volume of dredged material was 279,720m^3.

3.3 Site Environmental Audit

EPD officials from Water and Waste Management Group visited the dredging site on 3/7/2003. They took some photographs of the dredger and hopper barge. EPD officials of Water Policy & Planning Group inspected the water quality monitoring work on 11/7/2003. They also carried out in-situ measurement and took water samples for laboratory analysis for their own reference.

IEC conducted a site inspection on 3/7/2003. The inspection results given by IEC are attached in Appendix H.

Site audits were carried out by ET on a weekly basis to monitor environmental issues at the project area to ensure that all mitigation measures were implemented timely and properly. The site conditions were generally satisfactory. All required mitigation measures were implemented. The weekly site inspection results are attached in Appendix H.

3.4 Status of Environmental Licensing and Permitting

All permits/licenses obtained for the project are summarised in Table 3.3.

Table 3.3 Summary of Environmental Licensing and Permit Status

Description	Permit No.	Valid Period		highlights	Status
		From	To		
Environmental Permit	EP-0165/2003	08/04/03	-	The whole construction work site.	Valid
Construction Noise Permit	GW-UW0156-03	01/06/03	30/11/03	Operation of PME's allowed during the restricted hours (07:00-07:00 of next day on holidays and 19:00-07:00 of next day on all other days). Only one grab dredger allowed to be operated within each zone (viz. Zone A, B and C). Only one tug boat allowed to be operated within Zone A and B combined.	Issued on 23/05/2003
Marine Dumping Permit	EP/MD/04-011	01/06/03	30/09/03	Dumping at East Ninepin Disposal Area	Valid.

3.5 Implementation Status of Environmental Mitigation Measures

Mitigation measures detailed in the permits and the EM&A Manual (Construction Phase) are required to be implemented. An updated summary of the Environmental Mitigation Implementation Schedule (EMIS) is presented in Appendix I.

3.6 Implementation Status of Action/Limit Plans

The Action/Event Plans for water quality extracted from the EM&A Manual (Construction Phase) and the review report on marine water quality monitoring are presented in Appendix G.

3.7 Implementation Status of Environmental Complaint Handling Procedures

In July 2003, no complaint against the construction activities was received.

Table 3.4 Environmental Complaints / Enquiries Received in July 2003

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions /Actions Taken	Conclusion / Status
Nil	N/A	N/A

Table 3.5 Outstanding Environmental Complaints / Enquiries Received Before

Case Reference / Date, Time Received / Date, Time Concerned	Descriptions /Actions Taken	Conclusion / Status
Nil	N/A	N/A

4. FUTURE KEY ISSUES

4.1 Key Issues for the Coming Month

Key issues to be considered in the coming month include:

Noise Impact

- To continue executing the preventive measures for avoiding noise exceedance and monitoring/ reviewing the noise performance
- To ensure compliance with the CNP already obtained.

Water Impact

- To keep reviewing the monitoring results in order to take corresponding action to ensure the seawater quality.
- To carry out routine inspection and necessary maintenance for the cage-type silt curtains.

4.2 Monitoring Schedules for the Next 3 Months

The tentative environmental monitoring schedules for the next 3 months are shown in Appendix D.

4.3 Construction Program for the Next 3 Months

The tentative construction program for the next 3 months is shown in Appendix J.

5. CONCLUSION

Due to adverse weather conditions, the marine water quality monitoring work on 24th July 2003 was rescheduled to 1st August 2003. Other than that, marine water monitoring was conducted as scheduled in the reporting month. All monitoring results were checked and reviewed.

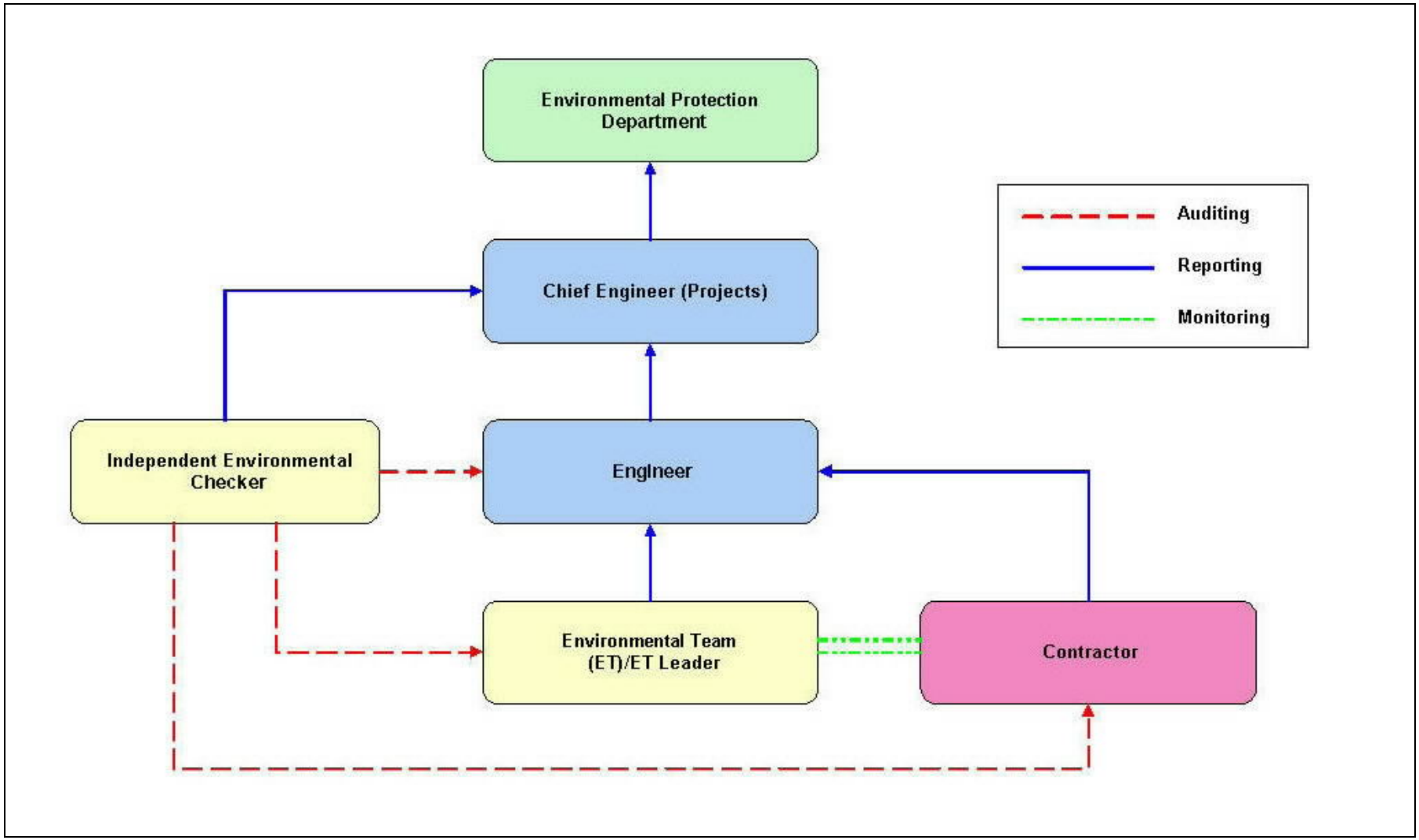
Seventeen (17) cases of Action Level exceedance on DO (Bottom) were recorded in the reporting month. As the Action Level exceedances were not related to construction activities, no further action was required.

The maximum hourly and daily dredging rates actually achieved by the contractor were within the limits specified in the latest dredging schedule.

Environmental mitigation measures recommended in the EM&A manual for the Project were implemented in the reporting month. No complaint against the Project was received. No prosecution was received for this Project in the reporting period.

The environmental performance of the Project was generally satisfactory.

Appendix A Organization Chart



Appendix B

Table B1 Amount of Dredged and Dumped Marine Sediment

Date	Dredged Marine Mud (bulk volume m^3)	Dumped Marine Mud (bulk volume m^3)	Maximum Hourly Dredging Rate (bulk volume m^3/hr)
1/7/2003	14,250	14,250	1,052
2/7/2003	13,500	13,500	1,012
3/7/2003	12,000	12,000	1,034
4/7/2003	7,500	7,500	928
5/7/2003	10,500	10,500	826
6/7/2003	11,250	11,250	876
7/7/2003	6,750	6,750	752
8/7/2003	3,750	3,750	376
9/7/2003	6,750	6,750	428
10/7/2003	7,500	7,500	752
11/7/2003	9,000	9,000	807
12/7/2003	12,750	12,750	856
13/7/2003	11,250	11,250	928
14/7/2003	11,250	11,250	928
15/7/2003	10,500	10,500	836
16/7/2003	13,500	13,500	1,082
17/7/2003	8,250	8,250	1,100
18/7/2003	9,750	9,750	766
19/7/2003	12,960	12,960	1,000
20/7/2003	6,750	6,750	1,003
21/7/2003	6,750	6,750	1,000
22/7/2003	12,210	12,210	876
23/7/2003	1,500	1,500	708
24/7/2003	0	0	0
25/7/2003	5,250	5,250	754
26/7/2003	8,250	8,250	836
27/7/2003	9,420	9,420	1,100
28/7/2003	7,500	7,500	774
29/7/2003	9,960	9,960	876
30/7/2003	8,460	8,460	804
31/7/2003	10,710	10,710	1,100

Summary of dredging rates for the reporting month

1. According to the latest dredging schedule (Table B2), the allowable daily and hourly dredging rates for July 2003 are 21,200m^3/day and 972m^3/hour respectively. The unit is in "in-situ" volume.

2. For the reporting month, the largest quantity of dredged mud on 1/7/2003 was 14,250 m^3 (bulk volume). The volume of dredged mud equals to (14,250 m^3/1.3) 10,962m^3/day in in-situ volume, where 1.3 is a bulking factor. Similarly, the largest maximum hourly dredging rate for the reporting month was (1,100m^3/1.3) 846m^3/hour in in-situ volume on17, 27 & 31/7/2003.

3. Hence, it can be concluded that the maximum hourly and daily dredging rates actually achieved by the contractors were within the limit specified in the latest dredging schedule.

Table B2 Dredging Schedule for Grab Dredger Option

Working Zone[1]	Construction Programme						
	June 2003	July 2003	August 2003	September 2003	October 2003	November 2003	December 2003
Abn	1 No.*	1 No.*	2 Nos.**	2 Nos.**	2 Nos.**	2 Nos.**	2 Nos.**
Abs	1 No.*	1 No.*	1 No.*	1 No.*	2 Nos.**	2 Nos.**	2 Nos.**
BCn	1 No.*	1 No.*	1 No.*	1 No. *	-	-	-
BCs	1 No.*	1 No.*	-	-	-	-	-
Maximum total daily dredging rate (m^3/day)	21,200		26,300		33,200		
Maximum total hourly dredging rate (m^3/hour)	972		1,205		1,522		

Remarks:
1: This table should be read in conjunction with Figure 4 of Environmental Permit No. EP-165/2003
*: A maximum of 1 number of grab dredger, with a grab capacity of no less than 8 cu.m. is allowed.
** : A maximum of 2 numbers of grab dredgers, each with a grab capacity of no less than 8 cu.m. is allowed.

Note:
The above maximum daily dredging rates are derived based on 24-hour dredging operations. If the daily workings hours are restricted, the maximum daily dredging rates will have to be reduced proportionally based on the allowable

Appendix C Action and Limit Levels for Water Quality Monitoring

Table C1 Action / Limit Levels for Dissolved Oxygen (mg/L)

(a) Surface and Middle – Dry Season (November – March)

	SR6	SR7	SR11	SR12	SR14	SR15
Action Level (5%-ile)	5.2*	5.2*				
1%-ile	4.3**	4.6**				
Limit Level	4.0***					

Note:

1. * - figure 5.2 mg/L represents 5%-ile of baseline monitoring data and Marine Water Quality (MWQ) in Hong Kong from 1997 to 2001
2. ** - figures 4.3 and 4.6 mg/L represent 1%-ile of baseline monitoring data and MWQ in Hong Kong from 1997 to 2001
3. *** - WQO for DO in non-FCZ
4. All the figures may be subjected to review by EPD as and when necessary.

(b) Surface and Middle – Wet Season (April – October)

	SR6	SR7	SR11	SR12	SR14	SR15
Action Level (5%-ile)	4.2*	4.6*				
1%-ile	3.9**	4.3**				
Limit Level	4.0***					

Note:

1. * - figures 4.2 and 4.6 mg/L represent 5%-ile MWQ in Hong Kong from 1997 to 2001
2. ** - figures 3.9 and 4.3 mg/L represent 1%-ile of MWQ in Hong Kong from 1997 to 2001
3. *** - the WQO for DO in non-FCZ
4. All the figures may be subjected to review by EPD as and when necessary.

(c) Bottom – Dry Season (November – March)

	SR6	SR7	SR11	SR12	SR14	SR15
Action Level (5%-ile)	5.5*	5.4*				
1%-ile	4.1**	4.8**				
Limit Level	2.0***					

Note:

1. * - figures 5.5 and 5.4 mg/L represent 5%-ile of baseline monitoring data and MWQ in Hong Kong from 1997 to 2001
2. ** - figures 4.1 and 4.8 mg/L represent 1%-ile of baseline monitoring data and MWQ in Hong Kong from 1997 to 2001
3. *** - WQO for DO in non-FCZ
4. All the figures may be subjected to review by EPD as and when necessary.

(d) Bottom – Wet Season (April – October)

	SR6	SR7	SR11	SR12	SR14	SR15
Action Level (5%-ile)	2.7*	3.5*				
1%-ile	2.3**	2.0**				
Limit Level	2.0***					

Note:

a. * - figures 2.7 and 3.5 mg/L represent 5%-ile of MWQ in Hong Kong from 1997 to 2001

b. ** - figures 2.3 and 2.0 mg/L represent 1%-ile of MWQ in Hong Kong from 1997 to 2001

c. *** - WQO for DO in non-FCZ

d. All the figures may be subjected to review by EPD as and when necessary.

Table C2 Action / Limit Levels for Turbidity (NTU)

(depth-average)

	SR6	SR7	SR11	SR12	SR14	SR15
Action Level (95%-ile)	16.4	15.3	13.5	14.2	16.1	16.1
Limit Level (99%-ile)	17.4	16.1	16.2	16.2	16.5	16.8

Note:

1. 95% ile of baseline data is adopted for setting the Action Level for various SRs according to the EM&A Manual.
2. 99% ile of baseline data is adopted for setting the Limit Level for various SRs according to the EM&A Manual.
3. All the figures may be subjected to review by EPD as and when necessary.

Table C3 Action / Limit Levels for Suspended Solids (mg/L)

(depth-average)

	SR6	SR7	SR10	SR11	SR12	SR14	SR15
95%-ile	16.8	16.4	16.0	16.1	16.8	17.9	16.7
Action Level	16.8	16.4	--	16.1	16.8	17.9	16.7
99%-ile	16.9	16.8	16.2	16.4	17.0	18.8	17.8
Limit Level	16.9	16.8	100	16.4	17.0	18.8	17.8

Note:

1. No Action Level is applied to SR10 according to the EM&A Manual
2. Limit Level of SR10 is 100 mg/L according to the EM&A Manual
3. 95% ile of baseline data is adopted for setting the Action Level for various SRs according to the EM&A Manual.
4. 99% ile of baseline data is adopted for setting the Limit Level for various SRs according to the EM&A Manual.

5. All the figures may be subjected to review by EPD as and when necessary.

Appendix D

Environmental Monitoring Schedule

Navigation Channel Improvement Project - Marine Water Monitoring Schedule
Marine Water Monitoring Schedule (Revision 1)

Jul-2003

No.	Date		Tide	High tide	Low tide	Tentative Start Time
1	2/7/2003	Wed	Mid-flood	10:11	03:04	08:30
			Mid-ebb	10:11	18:08	13:15
2	4/7/2003	Fri	Mid-flood	11:35	04:43	08:30
			Mid-ebb	11:35	19:28	14:30
3	7/7/2003	Mon	Mid-flood	14:21	08:27	10:30
			Mid-ebb	14:21	21:36	16:00
4	9/7/2003	Wed	Mid-ebb	05:24	11:42	08:30
			Mid-flood	18:08	11:42	14:00
5	11/7/2003	Fri	Mid-ebb	06:31	13:58	09:15
			Mid-flood	21:11	13:58	16:00
6	14/7/2003	Mon	Mid-ebb	08:46	16:37	11:45
			Mid-flood	23:47	16:37	16:00
7	16/7/2003	Wed	Mid-flood	10:26	03:50	08:30
			Mid-ebb	10:26	18:03	13:15
8	18/7/2003	Fri	Mid-flood	11:53	05:28	08:30
			Mid-ebb	11:53	19:14	14:30
9	21/7/2003	Mon	Mid-flood	14:05	08:38	10:15
			Mid-ebb	14:05	20:44	16:00
10	24/7/2003	Thu	Mid-ebb	05:42	13:18	08:30
			Mid-flood	19:19	13:18	15:15
11	26/7/2003	Sat	Mid-ebb	06:39	14:46	09:45
			Mid-flood	21:40	14:46	16:00
12	28/7/2003	Mon	Mid-ebb	07:53	15:56	11:00
			Mid-flood	22:44	15:56	16:00
13	31/7/2003	Thu	Mid-flood	10:11	03:23	08:30
			Mid-ebb	10:11	17:38	13:00

Note: 1. The time of high tide and low tide is made reference of tidal information at Chi Ma Wan provided by the HKO.

2. Monitoring works will not be arranged during night time period for safety reasons.

3. Monitoring works should be carried out three days per week at mid-flood and mid-ebb.

4. The interval between two sets of monitoring should not be less than 36 hours.

Navigation Channel Improvement Project - Marine Water Monitoring Schedule
Marine Water Monitoring Schedule (Revision 1)

Aug-2003

No.	Date		Tide	High tide	Low tide	Tentative Start Time
1	2/8/2003	Sat	Mid-flood	11:39	05:11	08:30
			Mid-ebb	11:39	18:44	14:15
2	4/8/2003	Mon	Mid-flood	13:16	07:07	09:15
			Mid-ebb	13:16	19:54	15:30
3	7/8/2003	Thu	Mid-ebb	04:32	11:45	08:30
			Mid-flood	18:49	11:45	14:15
4	9/8/2003	Sat	Mid-ebb	06:04	14:08	09:00
			Mid-flood	21:34	14:08	16:00
5	11/8/2003	Mon	Mid-ebb	07:48	15:41	10:45
			Mid-flood	22:47	15:41	16:00
6	14/8/2003	Thu	Mid-flood	10:11	03:49	08:30
			Mid-ebb	10:11	17:23	12:45
7	16/8/2003	Sat	Mid-flood	11:31	05:19	08:30
			Mid-ebb	11:31	18:16	14:00
8	18/8/2003	Mon	Mid-flood	12:43	06:55	08:45
			Mid-ebb	12:43	19:02	14:45
9	21/8/2003	Thu	Mid-ebb	03:23	11:52	08:30
			Mid-flood	22/8/2003 04:19	11:52	16:00
10	23/8/2003	Sat	Mid-ebb	05:11	13:51	08:30
			Mid-flood	24/8/2003 06:00	13:51	16:00
11	25/8/2003	Mon	Mid-ebb	06:48	14:58	10:00
			Mid-flood	21:56	14:58	16:00
12	27/8/2003	Wed	Mid-ebb	08:27	15:58	11:15
			Mid-flood	22:11	15:58	16:00
13	29/8/2003	Fri	Mid-flood	10:06	03:35	08:30
			Mid-ebb	10:06	16:58	12:30

Note: 1. The time of high tide and low tide is made reference of tidal information at Chi Ma Wan provided by the HKO.

2. Monitoring works will not be arranged during night time period for safety reasons.

3. Monitoring works should be carried out three days per week at mid-flood and mid-ebb.

4. The interval between two sets of monitoring should not be less than 36 hours.

Navigation Channel Improvement Project - Marine Water Monitoring Schedule
Marine Water Monitoring Schedule

Sep-2003

No.	Date		Tide	High tide	Low tide	Tentative Start Time
1	2/9/2003	Tue	Mid-flood	13:47	07:02	09:30
			Mid-ebb	13:47	19:02	15:30
2	4/9/2003	Thu	Mid-ebb	02:16	10:11	08:30
			Mid-flood	18:04	10:11	13:00
3	6/9/2003	Sat	Mid-ebb	04:48	13:15	08:30
			Mid-flood	20:59	13:15	16:00
4	8/9/2003	Mon	Mid-ebb	06:56	14:42	09:45
			Mid-flood	21:50	14:42	16:00
5	10/9/2003	Wed	Mid-ebb	08:38	15:47	11:15
			Mid-flood	22:26	15:47	16:00
6	12/9/2003	Fri	Mid-flood	10:02	03:46	08:30
			Mid-ebb	10:02	16:37	12:15
7	14/9/2003	Sun	Mid-flood	11:20	05:06	08:30
			Mid-ebb	11:20	17:22	13:15
8	16/9/2003	Tue	Mid-flood	12:39	06:32	08:30
			Mid-ebb	12:39	17:52	14:15
9	19/9/2003	Fri	Mid-ebb	00:47	10:31	08:30
			Mid-flood	20/9/2003 02:04	10:31	16:00
10	22/9/2003	Mon	Mid-ebb	05:25	13:48	08:30
			Mid-flood	21:13	13:48	16:00
11	24/9/2003	Wed	Mid-ebb	07:23	14:48	10:00
			Mid-flood	21:09	14:48	16:00
12	26/9/2003	Fri	Mid-ebb	09:12	15:46	11:30
			Mid-flood	21:44	15:46	16:00
13	29/9/2003	Mon	Mid-flood	11:51	05:08	08:30
			Mid-ebb	11:51	17:16	13:30

Notes: 1. The time of high tide and low tide is made reference to tidal information at Chi Ma Wan provided by the HKO.

2. Monitoring works will not be arranged during night time period for safety reasons.

3. Monitoring works should be carried out three days per week at mid-flood and mid-ebb.

4. The interval between two sets of monitoring should not be less than 36 hours.

Navigation Channel Improvement Project - Marine Water Monitoring Schedule

Marine Water Monitoring Schedule

Oct-2003

No.	Date		Tide	High tide	Low tide	Tentative Start Time
1	1/10/2003	Wed	Mid-flood	14:28	06:59	09:45
			Mid-ebb	14:28	18:14	15:15
2	3/10/2003	Fri	Mid-ebb	01:28	10:08	08:30
			Mid-flood	4/10/2003 02:48	10:08	16:00
3	6/10/2003	Mon	Mid-ebb	05:47	13:32	08:45
			Mid-flood	20:51	13:32	16:00
4	8/10/2003	Wed	Mid-ebb	07:50	14:38	10:15
			Mid-flood	21:18	14:38	16:00
5	10/10/2003	Fri	Mid-ebb	09:18	15:27	11:15
			Mid-flood	21:39	15:27	16:00
6	13/10/2003	Mon	Mid-flood	11:15	04:53	08:30
			Mid-ebb	11:15	16:27	12:45
7	15/10/2003	Wed	Mid-ebb	06:14	12:42	08:30
			Mid-flood	16:34	12:42	13:45
8	18/10/2003	Sat	Mid-ebb	17/10/2003 23:36	09:31	08:30
			Mid-flood	19/10/2003 00:34	09:31	16:00
9	20/10/2003	Mon	Mid-ebb	02:36	12:01	08:30
			Mid-flood	21/10/2003 04:47	12:01	16:00
10	22/10/2003	Wed	Mid-ebb	06:01	13:24	08:45
			Mid-flood	20:05	13:24	15:45
11	24/10/2003	Fri	Mid-ebb	08:10	14:28	10:15
			Mid-flood	20:32	14:28	16:00
12	27/10/2003	Mon	Mid-flood	12:10	05:04	08:30
			Mid-ebb	12:10	16:33	13:15
13	29/10/2003	Wed	Mid-flood	13:26	05:58	08:45
			Mid-ebb	13:26	17:02	14:15

Notes: 1. The time of high tide and low tide is made reference to tidal information at Chi Ma Wan provided by the HKO.

2. Monitoring works will not be arranged during night time period for safety reasons.

3. Monitoring works should be carried out three days per week at mid-flood and mid-ebb.

4. The interval between two sets of monitoring should not be less than 36 hours.

Appendix E

Water Quality Monitoring Results

Date: 2/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	11:23	Surface	1	28.3 28.3	26.5 26.5	8.18 8.18	110.1 110.8	7.41 7.46	5.35	5.2 5.2	3.7	6.1	8.3
		Middle	11	26.3 26.3	39.3 39.0	7.74 7.74	50.6 50.5	3.27 3.26		3.2 3.0		8.4	
		Bottom	21	25.7 25.6	41.3 41.2	7.70 7.70	43.4 43.7	2.81 2.83	2.82	2.8 2.7		10.3	
	Other Observations:			Nil									
SR7	11:02	Surface	1	28.5 28.5	23.4 23.4	8.15 8.16	123.0 123.0	8.39 8.39	6.36	5.1 5.0	3.7	5.5	7.6
		Middle	4.5	27.9 27.8	33.3 33.2	7.78 7.78	66.0 66.0	4.32 4.32		3.1 2.8		7.3	
		Bottom	8	27.1 27.1	37.5 37.5	7.70 7.70	61.0 61.2	3.84 3.86	3.85	3.2 3.0		10.1	
	Other Observations:			Nil									
SR10	10:50	Surface	1	30.1 30.1	21.5 21.7	8.46 8.46	147.4 148.1	9.88 9.92	8.01	3.0 3.2	3.3	6.8	8.8
		Middle	4	29.0 29.0	31.9 32.0	8.20 8.18	91.9 93.3	6.08 6.15		3.9 3.9		9.0	
		Bottom	7	26.3 26.2	41.9 41.9	7.59 7.58	34.7 34.1	2.22 2.18	2.20	2.9 2.8		10.7	
	Other Observations:			Nil									
SR11	10:35	Surface	1	30.5 30.5	20.4 20.4	8.51 8.52	142.5 142.8	9.57 9.58	7.13	2.2 2.3	2.9	7.4	9.9
		Middle	4	27.8 27.9	33.9 33.8	7.84 7.85	72.2 71.4	4.70 4.66		3.1 3.2		10.1	
		Bottom	6.5	26.8 26.8	39.3 39.3	7.58 7.57	34.2 34.3	2.20 2.21	2.21	3.2 3.2		12.1	
	Other Observations:			Nil									
SR12	10:23	Surface	1	28.7 28.6	27.7 27.0	8.17 8.18	147.6 149.0	10.12 10.18	6.96	5.9 6.1	4.1	7.0	9.1
		Middle	4	27.4 27.4	35.1 35.2	7.72 7.71	58.1 57.7	3.79 3.76		4.1 4.1		9.2	
		Bottom	7	26.9 26.9	37.7 37.8	7.64 7.65	40.7 41.8	2.63 2.66	2.65	2.2 2.2		11.2	
	Other Observations:			Nil									
SR14	10:10	Surface	1	28.8 28.9	22.2 22.4	8.13 8.15	122.8 123.0	8.25 8.32	6.70	1.3 1.4	2.5	5.2	7.2
		Middle	5	27.8 27.8	31.2 31.2	7.86 7.86	77.9 76.3	5.14 5.09		4.3 4.0		7.1	
		Bottom	8.5	26.6 26.5	37.5 37.1	7.66 7.65	48.6 49.2	3.12 3.20	3.16	2.0 2.0		9.4	
	Other Observations:			Nil									
SR15	09:53	Surface	1	29.0 29.0	24.7 24.8	8.20 8.18	117.2 117.0	7.84 7.80	5.61	5.4 5.5	3.2	6.5	8.9
		Middle	10	27.0 27.0	41.6 41.6	7.71 7.72	53.9 53.7	3.41 3.40		1.0 1.0		8.7	
		Bottom	19	25.4 25.4	43.2 43.2	7.60 7.60	41.0 40.8	2.62 2.60	2.61	3.0 3.0		11.4	
	Other Observations:			Nil									
CS1	08:37	Surface	1	28.6 28.5	26.2 26.1	8.24 8.23	120.2 119.9	8.08 8.06	6.84	11.0 10.9	6.6	5.6	8.1
		Middle	4.5	27.8 27.8	27.9 27.9	7.90 7.90	83.6 83.3	5.62 5.60		4.8 4.6		8.2	
		Bottom	8	25.9 25.9	43.0 42.9	7.57 7.57	31.4 31.7	2.04 2.06	2.05	4.3 4.1		10.6	
	Other Observations:			Nil									
CS2	09:00	Surface	1	29.3 29.3	25.1 25.1	8.42 8.44	148.9 150.0	9.93 9.99	7.05	6.6 6.7	5.0	5.1	7.2
		Middle	5.5	27.1 27.1	34.0 34.0	7.67 7.66	62.9 61.9	4.18 4.11		5.0 4.9		7.1	
		Bottom	10	25.6 25.6	43.6 43.6	7.60 7.60	42.6 41.5	2.72 2.64	2.68	3.4 3.5		9.3	
	Other Observations:			Nil									
CS3	09:31	Surface	1	28.7 28.8	24.0 23.8	8.23 8.24	131.8 131.1	8.91 8.87	6.02	6.1 6.0	4.2	7.7	9.7
		Middle	11	26.1 26.1	43.2 43.2	7.67 7.68	49.4 48.8	3.18 3.10		3.5 3.6		9.5	
		Bottom	20.5	25.2 25.2	43.7 43.7	7.65 7.65	45.0 44.8	2.89 2.88	2.89	3.0 3.0		12.0	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 2/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	16:28	Surface	1	27.5 27.5	30.9 30.8	7.82 7.83	76.5 76.1	5.10 5.05	4.79	2.7 2.8	6.8	5.2	7.3
		Middle	11.5	26.1 26.1	40.1 40.1	7.59 7.59	69.0 69.2	4.50 4.51		4.8 4.9		7.4	
		Bottom	21.5	25.5 25.5	43.0 43.0	7.57 7.57	47.0 46.0	2.87 2.80	2.84	12.8 13.0		9.2	
	Other Observations:			Nil									
SR7	16:08	Surface	1	28.0 28.1	27.7 27.8	8.02 8.01	107.4 107.9	7.14 7.21	6.19	3.3 3.4	3.1	5.9	8.4
		Middle	4.5	27.5 27.5	30.7 30.6	7.83 7.82	78.3 77.3	5.27 5.15		3.1 3.2		8.1	
		Bottom	8	26.8 26.8	34.3 34.3	7.61 7.60	60.2 60.0	3.80 3.80	3.80	2.9 2.9		11.2	
	Other Observations:			Nil									
SR10	15:45	Surface	1	30.2 30.2	22.9 22.9	8.48 8.49	184.2 185.6	12.20 12.33	11.01	5.1 5.2	3.7	4.4	7.3
		Middle	4.5	29.7 29.6	27.1 27.0	8.27 8.28	147.8 147.2	9.82 9.70		3.8 3.6		7.4	
		Bottom	7.5	27.4 27.5	34.7 34.9	7.80 7.79	80.3 79.6	5.33 5.24	5.29	2.3 2.4		10.1	
	Other Observations:			Nil									
SR11	15:31	Surface	1	30.9 31.0	21.1 21.0	8.51 8.52	185.8 186.0	12.31 12.32	10.63	5.0 4.7	4.0	6.6	9.6
		Middle	4	28.6 28.5	27.6 27.5	8.10 8.11	134.2 133.7	8.96 8.92		3.2 3.1		10.4	
		Bottom	7	28.3 28.3	31.1 31.1	8.00 8.00	112.7 113.8	7.36 7.45	7.41	4.0 3.9		11.9	
	Other Observations:			Nil									
SR12	15:16	Surface	1	29.6 29.6	23.2 23.2	8.49 8.48	195.6 195.4	13.03 13.07	11.44	12.9 12.8	6.7	5.1	8.4
		Middle	4	28.3 28.3	26.3 26.3	8.04 8.03	146.2 148.5	9.77 9.89		3.5 3.7		8.2	
		Bottom	7	27.4 27.4	33.9 34.0	7.75 7.75	70.2 69.5	4.62 4.55	4.59	3.5 3.6		12.0	
	Other Observations:			Nil									
SR14	14:55	Surface	1	29.8 29.8	24.6 24.6	8.50 8.51	172.6 173.2	11.42 11.46	9.03	5.4 5.4	4.1	5.4	7.3
		Middle	5	28.2 28.2	31.1 31.1	7.88 7.87	101.6 100.0	6.66 6.56		3.7 3.9		7.3	
		Bottom	8.5	26.6 26.6	39.7 39.8	7.62 7.63	60.7 59.2	3.80 3.76	3.78	3.1 3.2		9.2	
	Other Observations:			Nil									
SR15	14:37	Surface	1	28.9 28.8	24.9 24.9	8.17 8.18	152.8 155.7	10.22 10.37	6.79	4.0 3.8	4.6	5.5	7.9
		Middle	10.5	26.5 26.5	42.8 42.8	7.60 7.61	50.5 50.4	3.28 3.27		2.5 2.7		8.4	
		Bottom	20	25.3 25.3	43.6 43.6	7.63 7.63	41.3 41.2	2.65 2.62	2.64	7.2 7.1		10.0	
	Other Observations:			Nil									
CS1	13:20	Surface	1	27.8 27.7	29.3 29.2	7.97 7.98	101.7 102.8	6.79 6.83	5.80	2.8 2.9	3.5	6.6	8.5
		Middle	5	27.0 27.0	32.9 32.9	7.79 7.79	72.6 72.1	4.81 4.78		2.3 2.3		8.6	
		Bottom	8.5	26.4 26.4	41.2 41.1	7.48 7.48	59.1 58.2	2.57 2.46	2.52	5.1 5.3		10.2	
	Other Observations:			Nil									
CS2	13:42	Surface	1	29.1 29.1	25.6 25.7	8.27 8.25	168.4 166.3	11.33 11.19	8.28	10.0 10.1	5.8	7.1	10.3
		Middle	6	27.3 27.3	31.1 31.2	7.74 7.72	80.8 78.6	5.38 5.23		3.1 3.2		11.1	
		Bottom	10.5	26.0 26.0	43.5 43.5	7.60 7.59	43.1 42.0	2.81 2.68	2.75	4.0 4.1		12.9	
	Other Observations:			Nil									
CS3	14:15	Surface	1	28.5 28.5	26.6 26.6	8.24 8.22	159.4 159.2	10.69 10.67	7.27	4.4 4.6	5.2	7.0	9.1
		Middle	11	26.5 26.5	42.5 42.5	7.66 7.67	60.9 59.7	3.95 3.78		2.0 2.0		9.4	
		Bottom	21	24.8 24.8	43.7 43.7	7.65 7.64	51.5 51.3	3.33 3.32	3.33	9.1 9.2		10.9	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 4/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	11:23	Surface	1	28.8 28.7	29.2 28.9	8.21 8.21	112.0 115.9	7.32 7.58	6.32	2.9 2.6	5.7	7.8	9.5
		Middle	11	26.1 26.2	38.6 38.3	7.74 7.77	80.6 78.2	5.27 5.11		2.3 2.5		8.8	
		Bottom	21	24.7 24.7	43.4 43.4	7.66 7.65	55.0 52.6	3.55 3.40	3.48	12.1 11.7		11.8	
	Other Observations:			Nil									
SR7	11:09	Surface	1	28.6 28.5	29.4 29.6	8.19 8.19	118.0 118.9	7.76 7.83	7.41	2.6 3.1	6.4	8.2	9.8
		Middle	5	27.3 27.2	34.9 35.0	7.79 7.80	109.5 105.5	7.16 6.90		8.5 7.7		9.3	
		Bottom	9	25.5 25.5	43.2 43.2	7.64 7.64	62.4 59.8	4.08 3.91	4.00	8.1 8.4		12.1	
	Other Observations:			Nil									
SR10	10:43	Surface	1	29.2 29.3	22.6 22.6	8.37 8.36	136.6 139.4	8.71 8.89	6.98	2.0 2.1	2.7	5.9	8.2
		Middle	4.5	27.6 27.5	36.0 36.1	7.78 7.77	82.9 78.9	5.29 5.03		1.7 1.7		8.1	
		Bottom	7.5	25.8 25.8	42.8 42.7	7.62 7.63	61.3 60.7	3.91 3.87	3.89	4.6 4.3		10.5	
	Other Observations:			Nil									
SR11	10:30	Surface	1	29.1 29.2	22.0 22.1	8.40 8.41	138.9 137.8	8.86 8.79	7.31	3.2 3.5	7.3	8.1	10.3
		Middle	4	27.3 27.4	38.9 38.7	7.65 7.64	90.2 91.6	5.75 5.84		8.0 7.7		10.3	
		Bottom	7	26.6 26.5	38.9 39.8	7.63 7.62	66.7 67.5	4.25 4.30	4.28	10.4 10.8		12.4	
	Other Observations:			Nil									
SR12	10:17	Surface	1	30.4 30.5	21.5 21.4	8.28 8.30	130.4 131.6	8.69 8.77	7.42	1.8 1.7	2.7	5.9	7.8
		Middle	4.5	28.0 28.1	33.2 33.3	7.90 7.87	94.6 92.8	6.16 6.04		2.0 1.9		7.4	
		Bottom	7.5	26.2 26.2	40.8 40.8	7.65 7.66	72.0 68.7	4.59 4.38	4.49	4.2 4.5		10.1	
	Other Observations:			Nil									
SR14	10:03	Surface	1	29.0 29.1	22.0 22.1	8.33 8.34	125.9 128.1	8.57 8.72	6.98	2.6 2.8	2.9	7.8	9.4
		Middle	5.5	27.5 27.4	33.7 33.8	7.82 7.80	78.6 77.5	5.35 5.28		2.1 2.0		8.6	
		Bottom	10	25.2 25.1	43.5 43.3	7.61 7.61	56.4 55.7	3.84 3.79	3.82	3.9 4.1		11.8	
	Other Observations:			Nil									
SR15	09:48	Surface	1	28.8 28.9	23.3 23.4	8.27 8.27	124.3 121.8	8.35 8.18	6.84	2.8 2.7	4.8	6.0	9.1
		Middle	11.5	25.9 25.8	42.1 42.0	7.71 7.69	81.4 79.8	5.47 5.36		2.1 1.9		8.9	
		Bottom	21.5	24.8 24.9	43.6 43.6	7.60 7.60	50.8 54.1	3.41 3.63	3.52	9.7 9.4		12.4	
	Other Observations:			Nil									
CS1	08:49	Surface	1	28.3 28.2	29.1 29.0	8.12 8.14	113.2 115.6	7.50 7.66	7.13	5.0 4.6	4.7	6.6	8.8
		Middle	5.5	27.5 27.5	32.5 32.4	7.95 7.90	103.6 99.3	6.82 6.54		2.8 2.5		8.6	
		Bottom	9.5	25.0 24.8	42.8 42.9	7.66 7.65	74.3 66.9	4.89 4.41	4.65	6.4 6.9		11.2	
	Other Observations:			Nil									
CS2	09:10	Surface	1	28.7 28.5	28.7 28.9	8.23 8.20	130.5 124.8	8.54 8.34	7.48	3.9 4.2	6.4	5.6	8.1
		Middle	6	26.8 26.8	35.5 35.4	7.67 7.69	99.2 100.2	6.49 6.56		2.5 2.1		7.5	
		Bottom	10.5	25.4 25.4	43.4 43.5	7.58 7.59	54.7 52.6	3.48 3.35	3.42	13.6 12.2		11.2	
	Other Observations:			Nil									
CS3	09:29	Surface	1	28.7 28.8	25.2 25.4	8.15 8.17	132.5 130.4	8.86 8.72	7.17	2.9 3.3	2.6	6.6	9.3
		Middle	11.5	27.7 27.8	40.2 40.3	7.90 7.92	87.8 88.9	5.52 5.59		1.4 1.5		9.0	
		Bottom	22	25.2 25.0	43.5 43.6	7.63 7.60	57.7 56.5	3.63 3.55	3.59	3.0 3.2		12.3	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 4/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	16:53	Surface	1	29.5 29.5	28.2 28.3	8.44 8.42	147.2 148.5	9.47 9.56	7.66	4.1 4.5	7.1	8.1	10.0
		Middle	11	27.4 27.3	33.5 33.6	8.10 8.11	91.5 88.7	5.89 5.71		2.7 2.9		9.9	
		Bottom	20.5	25.6 25.5	42.7 42.8	7.63 7.61	45.2 44.3	2.91 2.85	2.88	14.7 13.8		12.0	
	Other Observations:			Nil									
SR7	16:41	Surface	1	30.1 30.0	26.2 26.2	8.46 8.44	139.4 142.7	9.12 9.33	8.47	3.0 2.8	3.0	7.4	10.1
		Middle	5	28.5 28.4	29.7 29.8	8.15 8.13	118.5 117.4	7.75 7.68		2.6 2.7		10.2	
		Bottom	8.5	27.6 27.7	33.7 33.8	7.80 7.79	83.2 82.1	5.44 5.37	5.41	3.6 3.4		12.8	
	Other Observations:			Nil									
SR10	16:24	Surface	1	30.8 30.9	23.4 23.4	8.48 8.46	161.5 163.2	10.57 10.68	8.66	2.6 2.5	1.7	6.5	8.8
		Middle	4	28.6 28.5	34.3 34.5	7.92 7.91	102.5 104.0	6.64 6.74		1.4 1.3		8.8	
		Bottom	7	27.1 27.1	37.7 37.8	7.74 7.74	58.9 57.9	3.79 3.73	3.76	1.3 1.2		11.0	
	Other Observations:			Nil									
SR11	16:11	Surface	1	30.3 30.2	29.5 29.4	8.49 8.48	135.0 133.8	8.82 8.74	6.79	2.5 2.4	3.5	6.0	8.0
		Middle	4	27.1 27.0	38.2 38.3	7.73 7.71	72.9 73.9	4.76 4.83		4.2 4.5		7.7	
		Bottom	7	26.8 26.9	38.4 38.4	7.68 7.69	53.3 54.5	3.48 3.56	3.52	3.7 3.9		10.4	
	Other Observations:			Nil									
SR12	15:56	Surface	1	30.7 30.8	21.6 21.5	8.46 8.45	158.8 160.9	10.47 10.61	8.43	2.0 2.3	1.8	7.0	9.4
		Middle	4	28.3 28.1	34.2 34.1	8.42 8.42	97.9 95.8	6.39 6.25		1.9 1.8		9.5	
		Bottom	7	27.3 27.2	34.9 35.1	7.84 7.83	75.8 74.8	4.95 4.88	4.92	1.3 1.2		11.7	
	Other Observations:			Nil									
SR14	15:42	Surface	1	29.4 29.5	25.2 25.1	8.44 8.45	159.8 161.3	10.43 10.53	8.53	2.3 2.4	2.0	7.7	10.2
		Middle	5.5	27.7 27.6	33.3 33.4	8.01 7.98	101.0 100.2	6.61 6.56		2.6 2.5		10.2	
		Bottom	9.5	27.4 27.4	35.1 35.0	7.84 7.83	77.6 76.9	5.04 5.00	5.02	1.1 1.0		12.8	
	Other Observations:			Nil									
SR15	15:28	Surface	1	28.4 28.5	30.2 30.2	8.25 8.24	135.8 133.1	8.90 8.72	7.68	2.7 3.0	6.2	6.1	8.9
		Middle	11	27.5 27.4	39.5 39.6	7.87 7.86	102.4 104.6	6.48 6.62		1.5 1.7		8.9	
		Bottom	20.5	25.2 25.2	43.2 43.2	7.60 7.62	55.9 58.7	3.67 3.85	3.76	13.8 14.5		11.9	
	Other Observations:			Nil									
CS1	14:32	Surface	1	29.7 29.7	28.6 28.7	8.44 8.45	151.6 149.6	9.97 9.84	8.66	7.1 6.8	4.4	5.6	7.9
		Middle	5	27.9 27.8	31.6 31.6	8.09 8.07	113.3 111.9	7.45 7.36		4.0 4.3		8.0	
		Bottom	9	27.3 27.3	34.1 34.3	7.91 7.91	90.5 91.2	5.93 5.98	5.96	2.0 1.9		10.3	
	Other Observations:			Nil									
CS2	14:51	Surface	1	29.2 29.3	28.3 28.2	8.42 8.43	142.9 141.1	9.42 9.30	8.44	5.9 5.4	4.3	6.5	9.0
		Middle	5.5	27.9 27.9	31.4 31.6	8.02 8.04	116.1 112.0	7.65 7.38		4.6 4.3		8.9	
		Bottom	9.5	26.7 26.6	35.8 35.8	7.67 7.65	54.3 51.8	3.57 3.40	3.49	3.0 2.7		11.7	
	Other Observations:			Nil									
CS3	15:12	Surface	1	30.5 30.6	23.5 23.7	8.44 8.42	175.9 176.3	11.66 11.68	8.91	3.1 3.3	3.2	7.1	9.5
		Middle	11	27.3 27.4	40.3 40.4	7.79 7.80	99.5 94.3	6.31 5.98		1.6 1.4		9.5	
		Bottom	21	24.9 25.0	43.6 43.7	7.61 7.63	60.4 55.5	3.85 3.54	3.70	5.0 4.6		12.1	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 7/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	13:00	Surface	1	28.5 28.5	30.5 30.5	8.14 8.13	88.5 90.7	5.49 5.63	4.85	2.5 2.6	5.8	8.9	10.8
		Middle	11	25.3 25.3	42.0 42.0	7.67 7.67	56.2 52.7	3.94 4.33		2.8 3.0		10.6	
		Bottom	21	24.7 24.7	43.3 43.3	7.63 7.62	38.9 39.3	2.81 2.84	2.83	11.4 12.5		13.0	
	Other Observations:			Nil									
SR7	12:48	Surface	1	28.2 28.2	29.0 29.0	8.04 8.04	94.7 90.4	6.68 6.53	5.82	3.1 3.0	6.4	6.9	9.2
		Middle	4.5	27.6 27.6	30.9 31.0	7.92 7.94	69.9 70.0	5.09 4.97		3.4 3.3		9.1	
		Bottom	8	26.5 26.5	38.0 38.1	7.72 7.70	67.6 64.6	5.03 5.04	5.04	11.6 13.8		11.7	
	Other Observations:			Nil									
SR10	12:30	Surface	1	30.3 30.3	24.8 24.8	8.46 8.47	123.1 123.0	8.08 8.07	6.86	2.2 2.1	6.1	6.1	8.7
		Middle	4.5	28.3 28.3	32.6 32.6	8.02 8.01	90.8 81.5	5.88 5.42		2.5 2.6		8.0	
		Bottom	7.5	27.7 27.8	31.3 31.2	7.87 7.88	76.6 70.2	4.95 4.54	4.75	13.2 13.9		12.0	
	Other Observations:			Nil									
SR11	12:20	Surface	1	29.2 29.1	27.5 27.6	8.41 8.40	117.6 120.6	7.59 7.89	6.44	3.6 3.8	4.3	5.9	8.3
		Middle	4	27.7 27.6	34.7 34.8	7.90 7.89	86.9 75.9	5.37 4.92		4.1 4.3		8.2	
		Bottom	7	27.5 27.5	35.4 35.6	7.84 7.84	59.1 58.5	3.82 3.78	3.80	4.8 5.0		11.0	
	Other Observations:			Nil									
SR12	12:08	Surface	1	30.5 30.4	26.2 26.2	8.46 8.47	93.1 95.1	6.08 6.22	5.93	4.0 4.1	5.4	8.8	11.1
		Middle	4.5	28.3 28.3	31.7 31.7	8.09 8.10	86.3 88.0	5.66 5.74		5.6 5.8		10.8	
		Bottom	7.5	26.0 26.0	41.0 41.0	7.59 7.60	64.8 61.5	4.16 4.02	4.09	6.1 6.5		13.7	
	Other Observations:			Nil									
SR14	11:55	Surface	1	29.5 29.4	26.1 26.1	8.35 8.36	115.5 118.0	7.61 7.76	6.55	2.0 2.1	2.9	6.0	8.9
		Middle	5.5	26.8 26.8	37.1 37.1	7.72 7.73	83.6 83.0	5.42 5.39		3.0 3.2		8.9	
		Bottom	10	24.8 24.8	43.5 43.4	7.60 7.61	40.6 41.3	3.00 3.07	3.04	3.3 3.5		11.7	
	Other Observations:			Nil									
SR15	11:40	Surface	1	29.7 29.8	26.3 26.3	8.44 8.43	116.0 119.3	8.40 8.36	6.31	2.0 2.2	4.2	9.0	10.9
		Middle	11	25.6 25.6	42.9 43.0	7.55 7.56	55.9 56.9	4.21 4.28		4.9 5.0		10.3	
		Bottom	21	24.4 24.4	43.7 43.7	7.65 7.61	41.3 42.5	3.02 3.07	3.05	5.5 5.8		13.3	
	Other Observations:			Nil									
CS1	10:35	Surface	1	28.1 28.0	30.5 30.5	8.11 8.10	99.7 99.4	6.56 6.57	5.96	3.2 3.0	3.4	7.1	9.2
		Middle	5	27.4 27.5	31.7 31.6	7.89 7.90	77.7 77.8	5.35 5.36		3.1 3.3		9.5	
		Bottom	9	26.0 25.9	40.6 40.6	7.64 7.63	61.7 61.8	4.35 4.37	4.36	3.8 4.0		11.1	
	Other Observations:			Nil									
CS2	10:53	Surface	1	28.1 28.1	28.4 28.4	8.07 8.03	88.6 94.5	5.74 5.93	5.21	2.8 3.0	3.6	7.7	10.2
		Middle	6	27.5 27.5	32.2 32.2	7.86 7.86	68.6 66.7	4.72 4.45		3.2 3.3		10.6	
		Bottom	11	25.6 25.5	42.6 42.5	7.43 7.44	38.6 38.7	2.80 2.81	2.81	4.8 4.6		12.3	
	Other Observations:			Nil									
CS3	11:20	Surface	1	29.1 28.8	27.4 27.4	8.28 8.30	98.8 99.1	6.42 6.43	5.92	3.5 3.6	4.0	6.0	8.5
		Middle	11.5	24.9 24.9	43.4 43.5	7.59 7.59	78.2 79.5	5.40 5.44		3.9 4.0		8.2	
		Bottom	22	24.8 24.8	43.5 43.5	7.58 7.57	40.3 41.5	2.98 3.02	3.00	4.5 4.6		11.3	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 7/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	18:40	Surface	1	28.7 28.7	28.7 28.7	8.25 8.26	85.9 86.1	5.75 5.80	5.52	2.5 2.7	5.8	6.5	9.1
		Middle	11	26.3 26.3	41.0 41.1	7.96 7.70	81.1 81.8	5.23 5.29		7.3 8.3		8.8	
		Bottom	21	25.2 25.3	43.2 43.1	7.57 7.58	80.8 80.4	5.09 5.07	5.08	6.5 7.5		12.0	
	Other Observations:			Nil									
SR7	18:22	Surface	1	30.7 30.7	26.5 26.5	8.48 8.49	142.0 141.5	9.20 9.15	8.05	2.8 3.0	7.4	6.1	8.6
		Middle	4.5	28.3 28.3	30.1 30.2	8.15 8.14	104.9 104.7	6.93 6.92		10.3 11.3		9.2	
		Bottom	8	27.8 27.9	31.6 31.6	7.92 7.94	84.9 72.3	5.53 4.78	5.16	8.3 8.5		10.4	
	Other Observations:			Nil									
SR10	17:59	Surface	1	30.9 30.8	25.4 25.4	8.52 8.50	112.8 128.8	7.35 8.33	7.27	3.5 3.6	8.0	9.0	10.9
		Middle	4	27.5 27.5	35.3 35.3	7.82 7.82	101.8 103.4	6.68 6.73		12.5 11.6		10.6	
		Bottom	7	25.7 25.7	41.8 41.9	7.57 7.57	58.0 55.6	4.43 4.16	4.30	8.4 8.3		13.2	
	Other Observations:			Nil									
SR11	17:45	Surface	1	31.5 31.5	24.6 24.7	8.57 8.58	127.6 132.5	8.24 8.55	7.62	2.6 2.8	4.3	8.6	10.5
		Middle	4	29.2 29.2	28.0 28.1	8.33 8.34	105.4 104.0	6.88 6.80		4.7 4.8		10.1	
		Bottom	6.5	27.1 27.1	37.1 37.1	7.72 7.73	70.3 66.2	4.53 4.39	4.46	5.6 5.5		12.7	
	Other Observations:			Nil									
SR12	17:28	Surface	1	30.8 30.8	26.2 26.2	8.55 8.54	141.5 142.0	9.15 9.18	7.01	2.8 3.0	6.8	8.0	10.6
		Middle	4	27.1 27.1	37.4 37.4	7.73 7.74	78.3 76.0	4.90 4.82		4.3 4.2		10.6	
		Bottom	7	26.7 26.7	38.1 38.2	7.70 7.70	58.3 56.5	3.74 3.70	3.72	12.5 14.2		13.2	
	Other Observations:			Nil									
SR14	17:12	Surface	1	31.0 31.0	26.9 26.9	8.60 8.61	144.4 143.9	9.26 9.25	7.48	2.8 2.6	5.8	7.6	9.9
		Middle	4.5	28.2 28.2	32.9 32.9	8.12 8.11	88.1 86.7	5.75 5.67		2.6 2.5		10.0	
		Bottom	8	27.0 27.0	37.1 37.1	7.76 7.76	56.2 59.9	3.64 3.79	3.72	11.2 12.8		12.1	
	Other Observations:			Nil									
SR15	16:57	Surface	1	30.6 30.5	27.3 27.4	8.55 8.54	144.4 143.1	9.30 9.23	7.07	3.4 3.5	5.6	6.7	9.5
		Middle	10.5	25.4 25.4	43.1 43.1	7.61 7.62	75.9 76.1	4.85 4.88		3.8 4.0		9.9	
		Bottom	19.5	24.6 24.6	43.6 43.6	7.62 7.62	42.0 43.3	3.05 3.09	3.07	9.4 9.3		12.1	
	Other Observations:			Nil									
CS1	16:02	Surface	1	29.0 29.2	29.2 29.2	8.25 8.29	123.9 132.2	8.07 8.56	7.49	3.0 3.1	4.2	5.9	8.5
		Middle	5	28.1 28.1	31.0 30.9	8.09 8.08	101.6 101.0	6.68 6.64		3.8 4.1		8.1	
		Bottom	9	27.9 27.8	31.5 31.8	8.04 8.03	87.9 87.5	5.73 5.75	5.74	5.4 5.5		11.5	
	Other Observations:			Nil									
CS2	16:20	Surface	1	29.5 29.5	28.4 28.4	8.36 8.32	135.0 133.9	8.82 8.72	7.30	4.6 4.7	3.8	7.2	10.1
		Middle	5.5	27.8 27.8	30.3 30.3	7.93 7.94	87.2 88.5	5.78 5.86		4.0 4.1		10.2	
		Bottom	10	25.3 25.3	43.2 43.2	7.56 7.57	40.2 38.6	2.88 2.80	2.84	2.8 2.7		12.8	
	Other Observations:			Nil									
CS3	16:40	Surface	1	28.8 28.9	28.7 28.7	8.21 8.23	109.4 106.0	7.21 6.99	5.43	4.1 4.0	4.5	7.2	8.9
		Middle	10.5	25.5 25.5	42.9 42.9	7.58 7.59	58.7 55.6	3.77 3.73		4.4 4.5		8.9	
		Bottom	20	25.3 25.3	43.0 43.1	7.58 7.57	38.8 38.5	2.88 2.89	2.89	5.0 5.1		10.8	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 9/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	16:29	Surface	1	30.5 30.6	25.8 25.7	8.41 8.42	131.6 129.4	8.72 8.58	6.86	1.9 2.0	2.7	7.8	9.8
		Middle	12	27.6 27.5	30.6 30.4	7.90 7.91	76.9 75.2	5.12 5.00		3.5 3.3		9.7	
		Bottom	22.5	27.1 26.9	38.8 39.1	7.81 7.80	64.9 64.8	4.30 4.29	4.30	2.8 2.6		12.1	
	Other Observations:			Nil									
SR7	16:15	Surface	1	29.5 29.7	25.5 25.9	8.34 8.35	117.0 118.1	7.78 7.71	7.26	1.8 1.9	7.9	5.7	7.6
		Middle	5.5	25.1 25.3	40.6 40.2	7.60 7.65	101.1 102.9	6.72 6.84		6.9 6.3		7.5	
		Bottom	9.5	24.3 24.5	43.6 43.8	7.62 7.59	65.6 67.8	4.36 4.50	4.43	14.6 16.1		9.8	
	Other Observations:			Nil									
SR10	15:55	Surface	1	29.8 30.0	25.1 25.4	8.31 8.30	112.2 115.5	7.38 7.60	7.19	2.5 3.0	2.7	8.2	10.5
		Middle	4.5	28.6 28.5	29.8 29.7	8.09 8.07	104.9 104.4	6.91 6.88		2.3 2.1		10.3	
		Bottom	7.5	27.8 27.8	32.5 32.4	7.94 7.95	90.0 90.1	5.90 5.10	5.50	3.1 3.3		13.0	
	Other Observations:			Nil									
SR11	15:41	Surface	1	30.5 30.5	19.9 19.9	8.57 8.55	126.5 126.6	8.51 8.51	6.59	1.1 0.9	5.5	6.8	9.6
		Middle	4	28.1 28.0	32.0 32.3	7.87 7.90	73.3 70.9	4.75 4.60		1.3 1.4		10.0	
		Bottom	7	25.8 25.9	40.7 40.5	7.63 7.65	56.8 57.4	3.68 3.72	3.70	14.5 13.9		12.0	
	Other Observations:			Nil									
SR12	15:28	Surface	1	30.2 30.3	19.9 20.1	8.57 8.57	125.0 124.4	8.41 8.38	6.59	1.7 1.9	3.4	8.4	10.9
		Middle	4.5	27.8 27.9	37.2 37.3	8.12 7.98	74.6 73.9	4.80 4.76		2.1 2.2		11.1	
		Bottom	7.5	26.0 25.8	42.4 42.5	7.64 7.62	61.4 60.7	3.95 3.91	3.93	6.4 6.1		13.2	
	Other Observations:			Nil									
SR14	15:14	Surface	1	29.7 29.6	20.2 20.8	8.52 8.55	135.6 134.6	9.20 9.12	7.84	4.2 3.9	4.8	7.4	9.6
		Middle	5.5	25.4 25.5	41.4 41.3	7.62 7.64	96.9 95.1	6.58 6.45		2.9 2.7		10.1	
		Bottom	9.5	24.5 24.6	43.5 43.5	7.60 7.63	69.3 69.7	4.70 4.73	4.72	7.3 7.5		11.4	
	Other Observations:			Nil									
SR15	14:58	Surface	1	28.4 28.5	25.1 24.9	8.03 8.06	118.9 116.9	7.95 7.81	6.61	3.7 4.0	5.7	6.6	9.4
		Middle	11	25.5 25.4	42.7 42.8	7.65 7.64	82.7 84.1	5.29 5.38		1.6 1.5		9.8	
		Bottom	21	24.2 24.2	43.7 43.6	7.61 7.63	66.3 61.9	4.24 3.96	4.10	11.5 11.8		11.9	
	Other Observations:			Nil									
CS1	14:02	Surface	1	29.2 29.1	27.9 30.1	8.39 8.36	130.7 133.9	8.58 8.80	6.97	2.4 2.5	2.4	8.7	11.1
		Middle	5	27.8 27.6	33.3 32.9	8.01 7.97	81.1 78.4	5.33 5.17		1.8 1.8		11.6	
		Bottom	9	25.6 25.5	42.4 42.6	7.58 7.62	60.4 63.1	3.97 4.15	4.06	2.9 3.1		13.0	
	Other Observations:			Nil									
CS2	14:19	Surface	1	29.3 29.2	27.5 27.3	8.41 8.45	124.9 125.5	8.49 8.53	7.17	3.0 2.7	3.2	7.6	10.0
		Middle	5.5	27.9 28.0	34.6 34.4	7.93 7.96	86.8 84.8	5.90 5.76		2.1 2.3		10.2	
		Bottom	10	25.4 25.2	40.3 40.1	7.66 7.67	61.4 64.0	4.17 4.35	4.26	4.6 4.4		12.1	
	Other Observations:			Nil									
CS3	14:41	Surface	1	28.6 28.9	23.1 22.9	8.03 8.01	113.9 115.2	7.74 7.83	6.59	2.2 2.5	3.5	6.5	8.6
		Middle	11.5	26.0 25.9	42.4 42.1	7.63 7.66	79.1 79.7	5.37 5.41		1.7 1.6		8.5	
		Bottom	21.5	24.4 24.3	43.6 43.6	7.60 7.59	47.6 48.7	3.23 3.31	3.27	6.2 6.8		11.0	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 9/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	11:12	Surface	1	30.7 30.8	26.4 26.5	8.36 8.35	120.0 121.2	7.86 7.94	6.65	3.5 3.4	6.9	7.7	10.5
		Middle	11.5	26.9 26.7	40.7 40.7	7.56 7.54	83.1 82.0	5.44 5.37		5.4 5.7		10.9	
		Bottom	21.5	24.8 24.8	43.4 43.2	7.54 7.55	63.8 61.5	4.18 4.03	4.11	11.4 12.0		13.0	
	Other Observations:			Nil									
SR7	10:57	Surface	1	29.4 29.2	25.7 25.5	8.21 8.24	113.4 111.6	7.43 7.31	6.64	4.1 3.8	6.5	7.4	9.8
		Middle	5	26.5 26.6	38.2 38.4	7.60 7.59	91.3 88.9	5.98 5.82		7.2 7.6		10.1	
		Bottom	8.5	24.7 24.7	39.4 39.5	7.61 7.63	58.2 58.6	3.81 3.84	3.83	8.0 8.3		11.9	
	Other Observations:			Nil									
SR10	10:38	Surface	1	29.8 29.6	24.8 25.1	8.14 8.13	115.3 115.7	7.55 7.58	6.92	3.3 3.4	3.6	6.1	8.5
		Middle	4	28.1 28.3	32.3 31.9	7.67 7.68	96.2 95.6	6.30 6.26		2.7 2.5		8.5	
		Bottom	7	25.6 25.5	35.6 36.6	7.58 7.55	72.7 72.2	4.76 4.73	4.75	4.9 4.8		11.0	
	Other Observations:			Nil									
SR11	10:23	Surface	1	29.3 29.1	21.6 21.8	8.42 8.38	126.1 124.8	8.57 8.48	6.91	1.7 1.9	4.6	6.1	8.2
		Middle	4	27.1 26.9	38.3 38.2	8.28 8.30	78.9 76.8	5.36 5.22		3.0 3.2		8.1	
		Bottom	6.5	25.2 25.0	43.4 44.0	7.71 7.69	61.1 63.3	4.15 4.30	4.23	8.6 9.2		10.5	
	Other Observations:			Nil									
SR12	10:17	Surface	1	29.5 29.6	21.2 21.4	8.55 8.49	128.6 130.2	8.74 8.85	7.16	2.1 2.3	3.2	8.8	10.6
		Middle	4	27.6 27.4	37.3 38.5	7.80 7.78	82.7 79.8	5.62 5.42		1.8 1.7		10.4	
		Bottom	7	24.9 25.1	42.9 43.1	7.65 7.64	55.9 54.9	3.80 3.73	3.77	6.0 5.4		12.8	
	Other Observations:			Nil									
SR14	10:01	Surface	1	29.7 29.8	20.1 20.3	8.53 8.50	126.4 127.1	8.59 8.63	7.27	1.5 1.3	3.8	8.1	10.0
		Middle	5	27.4 27.6	37.2 37.5	7.76 7.78	87.7 86.5	5.96 5.88		1.1 1.2		10.1	
		Bottom	8.5	25.0 25.1	43.3 43.4	7.62 7.63	59.2 58.0	4.02 3.94	3.98	8.7 8.9		11.9	
	Other Observations:			Nil									
SR15	09:44	Surface	1	29.9 29.9	20.5 20.6	8.50 8.49	124.4 122.0	8.41 8.25	6.56	1.6 1.7	4.4	6.5	8.6
		Middle	10.5	25.0 24.8	43.2 43.5	7.59 7.59	71.9 69.7	4.86 4.71		3.6 4.0		8.4	
		Bottom	19.5	24.4 24.9	43.6 43.4	7.58 7.58	49.9 50.3	3.38 3.40	3.39	8.0 7.4		11.0	
	Other Observations:			Nil									
CS1	08:46	Surface	1	28.6 28.6	27.4 27.3	8.27 8.18	126.0 125.1	8.38 8.32	6.81	4.9 4.5	3.6	7.1	9.5
		Middle	4.5	27.3 27.4	32.5 32.6	7.89 7.87	78.9 79.7	5.30 5.25		3.2 3.6		9.6	
		Bottom	8	27.1 27.0	34.4 34.3	7.85 7.86	72.2 72.1	4.75 4.74	4.75	2.6 2.8		11.9	
	Other Observations:			Nil									
CS2	09:04	Surface	1	29.4 29.3	26.4 26.6	8.32 8.37	118.0 116.3	7.77 7.66	7.43	2.5 2.5	2.6	8.5	10.8
		Middle	5.5	28.6 28.8	28.8 29.0	8.21 8.24	106.2 110.7	6.99 7.29		2.0 2.4		10.6	
		Bottom	9.5	27.9 27.5	30.7 30.9	7.98 7.89	86.5 86.1	5.71 5.65	5.68	2.8 3.1		13.4	
	Other Observations:			Nil									
CS3	09:26	Surface	1	29.6 29.7	20.5 20.8	8.45 8.43	125.9 125.0	8.13 8.38	6.31	1.1 1.2	1.3	6.4	8.9
		Middle	10.5	27.3 27.4	37.2 37.5	7.76 7.77	68.3 67.1	4.41 4.33		2.0 1.8		9.0	
		Bottom	20	25.3 24.1	43.1 43.4	7.66 7.64	50.1 53.8	3.22 3.46	3.34	0.8 1.0		11.3	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 11/7/2003
Weather: Rainy
Sea Condition: Moderate
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	18:40	Surface	1	29.4 29.5	23.9 23.8	8.39 8.39	103.7 103.8	6.93 6.94	5.59	2.3 2.2	4.4	4.6	8.5
		Middle	12	26.3 26.1	34.4 34.2	7.96 7.97	62.7 63.8	4.22 4.25		4.9 5.3		10.1	
		Bottom	22.5	25.2 25.0	36.3 36.7	7.78 7.81	47.4 44.9	3.19 3.02	3.11	5.8 6.1		10.9	
	Other Observations:			Nil									
SR7	18:26	Surface	1	30.0 30.1	22.2 22.4	8.38 8.39	109.1 108.7	7.30 7.27	6.67	1.6 1.5	3.2	6.9	9.0
		Middle	4.5	28.1 28.0	27.2 27.1	8.16 8.16	90.1 89.5	6.07 6.03		4.3 4.2		7.8	
		Bottom	8	27.4 27.3	28.9 29.0	8.04 8.05	76.2 75.5	5.14 5.09	5.12	3.8 3.6		12.3	
	Other Observations:			Nil									
SR10	18:06	Surface	1	29.9 30.1	19.3 19.4	8.57 8.56	104.8 105.7	7.12 7.18	7.04	2.9 3.1	3.8	5.7	6.0
		Middle	4.5	29.4 29.3	21.2 21.2	8.47 8.47	101.6 103.0	6.88 6.97		1.2 1.3		5.8	
		Bottom	7.5	25.9 26.0	36.2 36.3	7.80 7.81	53.0 50.8	3.59 3.44	3.52	6.8 7.4		6.4	
	Other Observations:			Nil									
SR11	17:51	Surface	1	30.1 30.2	19.0 18.9	8.59 8.59	108.6 109.0	7.37 7.40	6.27	9.2 8.9	8.3	5.2	8.5
		Middle	4.5	28.2 28.3	27.7 27.8	8.19 8.20	75.2 76.9	5.10 5.22		5.6 5.3		6.6	
		Bottom	7.5	27.2 27.3	37.3 36.9	7.91 7.93	55.4 53.5	3.76 3.63	3.70	10.7 10.1		13.9	
	Other Observations:			Nil									
SR12	17:36	Surface	1	30.2 30.3	19.7 19.9	8.59 8.59	111.5 111.4	7.54 7.53	7.43	5.2 4.8	3.5	5.0	7.2
		Middle	4.5	30.1 30.1	20.7 20.8	8.52 8.52	108.6 108.3	7.33 7.30		2.0 1.9		6.6	
		Bottom	7.5	25.6 25.4	35.1 36.0	7.81 7.81	57.0 55.7	3.85 3.76	3.81	3.5 3.7		10.0	
	Other Observations:			Nil									
SR14	17:19	Surface	1	30.0 29.9	20.0 20.1	8.59 8.59	111.6 111.0	7.55 7.51	6.89	4.8 5.2	3.6	3.7	5.3
		Middle	4.5	28.8 28.9	26.1 26.3	8.47 8.49	90.0 94.4	6.11 6.39		2.2 2.0		3.9	
		Bottom	8	24.4 24.3	37.8 37.9	7.77 7.77	62.9 59.7	4.26 4.04	4.15	3.8 3.6		8.3	
	Other Observations:			Nil									
SR15	17:04	Surface	1	29.8 29.8	20.4 20.3	8.53 8.52	111.9 111.8	7.57 7.56	5.89	5.4 4.9	4.4	6.4	8.0
		Middle	11.5	24.4 24.3	37.7 37.9	7.77 7.78	64.3 60.5	4.35 4.09		1.9 2.1		7.6	
		Bottom	22	23.9 24.0	38.3 38.5	7.75 7.75	39.5 41.4	2.67 2.80	2.74	6.0 6.3		10.0	
	Other Observations:			Nil									
CS1	16:04	Surface	1	28.1 28.3	24.4 24.5	8.09 8.10	96.6 98.9	6.55 6.71	5.77	7.9 7.6	7.5	7.4	9.0
		Middle	6	26.9 26.9	29.6 29.5	7.95 7.96	73.3 71.7	4.97 4.86		5.2 4.9		7.7	
		Bottom	10.5	26.1 26.2	31.4 31.3	7.86 7.87	47.8 46.7	3.24 3.17	3.21	9.9 9.5		11.8	
	Other Observations:			Nil									
CS2	16:21	Surface	1	29.3 29.4	20.8 20.9	8.49 8.47	107.8 108.5	7.34 7.38	6.66	1.5 1.7	3.2	9.2	8.0
		Middle	6	28.4 28.3	25.4 25.4	8.20 8.22	87.8 88.7	5.94 5.99		2.2 2.3		5.7	
		Bottom	10.5	25.2 25.3	37.1 37.2	7.78 7.76	45.2 43.1	3.06 2.92	2.99	5.6 5.8		9.2	
	Other Observations:			Nil									
CS3	16:45	Surface	1	29.7 29.8	21.9 22.1	8.47 8.47	106.3 106.8	7.15 7.19	5.69	0.9 0.7	2.5	5.0	8.0
		Middle	12	25.4 25.5	37.0 37.1	7.73 7.73	63.6 61.5	4.28 4.14		1.3 1.3		7.2	
		Bottom	22.5	23.7 23.7	38.4 38.3	7.79 7.78	42.9 43.8	2.89 2.95	2.92	5.3 5.2		11.8	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 11/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	12:10	Surface	1	28.8 28.6	25.7 25.9	8.30 8.25	91.8 90.9	6.15 6.10	4.84	1.5 1.3	3.4	6.2	7.8
		Middle	11.5	26.6 26.7	32.2 32.0	7.93 7.94	51.4 54.8	3.44 3.68		3.3 3.2		7.9	
		Bottom	22	26.2 26.2	33.4 33.4	7.88 7.88	44.5 45.0	2.98 3.02	3.00	6.0 4.9		9.4	
	Other Observations:			Nil									
SR7	11:47	Surface	1	28.4 28.7	26.6 25.3	8.22 8.26	85.1 89.1	5.66 5.60	5.17	2.4 2.2	3.3	5.8	8.2
		Middle	5	27.5 27.3	29.8 28.8	8.04 8.10	69.9 70.5	4.69 4.73		1.8 2.0		8.7	
		Bottom	9	26.9 26.9	31.3 31.2	7.96 7.96	56.8 59.6	3.81 3.97	3.89	5.8 5.4		10.2	
	Other Observations:			Nil									
SR10	11:35	Surface	1	30.2 30.1	18.2 18.3	8.55 8.55	102.2 100.6	6.97 6.86	6.99	1.0 0.9	1.0	4.0	4.0
		Middle	4	30.1 30.2	18.4 18.3	8.56 8.56	103.8 103.4	7.08 7.05		0.7 0.7		3.6	
		Bottom	7	26.9 27.1	24.5 24.7	7.83 7.84	55.3 52.8	3.77 3.60	3.69	1.5 1.3		4.3	
	Other Observations:			Nil									
SR11	11:23	Surface	1	30.3 30.3	17.6 17.1	8.55 8.55	104.7 102.9	7.16 7.05	7.20	0.9 0.8	1.1	3.9	5.3
		Middle	3.5	29.9 30.0	19.0 19.0	8.56 8.57	108.6 105.8	7.40 7.20		1.3 1.1		6.4	
		Bottom	6	29.7 29.7	20.9 20.9	8.48 8.48	106.8 106.7	7.24 7.23	7.24	1.1 1.1		5.7	
	Other Observations:			Nil									
SR12	11:01	Surface	1	29.8 29.8	20.5 20.4	8.51 8.52	109.3 108.0	7.40 7.31	7.41	1.2 1.0	1.0	3.6	4.4
		Middle	4	29.6 29.7	21.1 20.9	8.50 8.52	109.6 110.9	7.42 7.52		0.8 0.8		3.8	
		Bottom	7	29.6 29.6	21.2 21.1	8.49 8.49	108.2 109.0	7.33 7.43	7.38	1.0 0.9		5.7	
	Other Observations:			Nil									
SR14	10:51	Surface	1	29.8 29.9	20.2 20.3	8.53 8.53	111.4 110.0	7.56 7.47	7.22	2.5 2.4	1.7	4.2	3.3
		Middle	5.5	29.3 29.3	23.3 23.1	8.38 8.38	102.4 103.4	6.89 6.95		1.2 1.3		3.2	
		Bottom	10	27.8 27.7	31.6 31.7	7.99 7.98	68.3 67.2	4.50 4.43	4.47	1.3 1.4		2.7	
	Other Observations:			Nil									
SR15	10:38	Surface	1	29.9 29.9	20.2 20.4	8.53 8.52	109.4 108.6	7.40 7.35	5.58	0.6 0.6	0.9	4.1	4.5
		Middle	11	27.3 27.3	33.9 33.8	7.94 7.89	58.0 55.4	3.87 3.70		0.5 0.6		4.7	
		Bottom	21	25.4 25.3	37.4 37.2	7.78 7.77	34.3 33.8	2.27 2.25	2.26	1.7 1.6		4.7	
	Other Observations:			Nil									
CS1	09:22	Surface	1	29.3 29.2	20.6 21.0	8.47 8.46	104.3 103.0	7.12 7.03	6.96	1.2 1.4	1.4	4.4	4.5
		Middle	5.5	29.0 28.8	22.7 22.8	8.39 8.40	100.3 100.5	6.83 6.84		1.3 1.4		4.9	
		Bottom	10	28.6 28.5	23.9 23.2	8.34 8.30	95.7 91.9	6.45 6.26	6.36	1.6 1.5		4.3	
	Other Observations:			Nil									
CS2	09:47	Surface	1	29.4 29.3	18.7 19.1	8.51 8.51	106.3 105.4	7.32 7.26	7.26	1.4 1.6	1.6	4.1	5.4
		Middle	5.5	29.1 28.9	20.2 20.6	8.45 8.46	105.4 105.3	7.23 7.23		1.4 1.5		5.6	
		Bottom	10	28.9 28.9	21.5 21.4	8.44 8.44	103.4 101.1	7.06 6.92	6.99	1.7 1.8		6.4	
	Other Observations:			Nil									
CS3	10:20	Surface	1	29.9 29.9	23.5 23.5	8.43 8.43	101.5 95.6	6.75 6.36	5.00	0.7 0.8	1.2	3.8	7.6
		Middle	11	27.3 27.4	31.9 31.5	7.91 7.87	51.4 52.2	3.41 3.46		1.5 1.3		6.7	
		Bottom	21	24.8 24.5	37.4 37.7	7.78 7.75	34.7 33.9	2.30 2.28	2.29	1.4 1.4		12.4	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 14/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	18:40	Surface	1	27.7 27.7	26.9 27.0	7.85 7.86	91.2 90.9	5.62 5.57	4.87	2.8 3.1	5.7	7.2	9.5
		Middle	11.5	26.4 26.2	32.1 32.0	7.80 7.81	70.9 70.9	4.13 4.14		4.3 4.1		9.7	
		Bottom	22	24.9 24.9	36.4 36.5	7.77 7.78	44.3 46.4	3.05 3.03	3.04	9.6 10.0		11.8	
	Other Observations:			Nil									
SR7	18:23	Surface	1	27.7 27.8	26.4 26.5	7.84 7.84	92.6 92.4	5.78 5.65	4.93	3.8 3.5	3.3	9.0	10.8
		Middle	4.5	27.7 27.7	26.4 26.4	7.84 7.84	74.8 74.8	4.16 4.14		3.4 3.3		10.8	
		Bottom	8	27.8 27.8	27.3 27.5	7.86 7.86	58.6 57.8	4.04 3.96	4.00	2.9 2.7		12.8	
	Other Observations:			Nil									
SR10	18:04	Surface	1	28.5 28.6	29.9 30.0	8.22 8.21	118.9 118.8	6.29 6.21	6.02	1.5 1.7	1.9	6.9	8.8
		Middle	4.5	28.1 28.0	30.6 30.5	8.12 8.13	120.2 120.3	5.74 5.83		2.2 2.1		8.5	
		Bottom	8	27.3 27.2	33.4 33.3	8.01 7.99	74.8 72.7	4.05 3.92	3.99	1.9 2.0		11.1	
	Other Observations:			Nil									
SR11	17:48	Surface	1	30.3 30.2	26.7 26.8	8.38 8.39	132.4 133.8	8.66 8.75	7.38	2.1 2.0	6.1	8.4	10.8
		Middle	4.5	28.1 28.0	30.6 30.7	8.16 8.15	92.2 91.7	6.08 6.01		3.3 3.4		11.1	
		Bottom	7.5	27.2 27.2	32.9 33.1	7.98 7.98	60.1 57.9	3.93 3.80	3.87	13.2 12.5		12.9	
	Other Observations:			Nil									
SR12	17:33	Surface	1	29.7 29.8	27.8 27.7	8.33 8.35	126.2 123.8	8.20 8.06	6.35	2.5 2.6	4.6	6.0	8.1
		Middle	4.5	26.2 26.2	34.4 34.3	7.87 7.88	69.6 70.9	4.52 4.61		4.6 4.7		7.8	
		Bottom	8	35.3 35.2	37.1 37.2	7.83 7.82	50.3 51.2	3.27 3.33	3.30	6.4 6.6		10.4	
	Other Observations:			Nil									
SR14	17:17	Surface	1	29.2 29.3	28.7 28.7	8.29 8.30	120.4 121.9	7.84 7.94	7.19	4.8 4.9	5.5	8.5	10.2
		Middle	5.5	24.6 24.7	37.4 37.5	7.79 7.80	98.4 97.6	6.52 6.47		4.1 3.9		10.0	
		Bottom	9.5	24.3 24.2	37.9 37.9	7.77 7.78	45.6 44.5	3.02 2.95	2.99	7.4 7.6		12.2	
	Other Observations:			Nil									
SR15	16:59	Surface	1	28.7 28.8	28.3 28.4	8.12 8.14	99.3 100.0	6.54 6.58	5.22	9.7 8.8	6.5	7.1	9.7
		Middle	11	25.5 25.6	35.7 35.7	7.84 7.83	59.9 58.0	3.95 3.82		4.5 4.4		9.9	
		Bottom	20.5	24.0 24.1	38.0 38.1	7.77 7.77	41.4 41.9	2.73 2.76	2.75	5.7 5.6		12.0	
	Other Observations:			Nil									
CS1	16:03	Surface	1	28.2 28.2	24.2 24.6	7.85 7.85	78.6 79.4	5.34 5.41	4.75	6.2 6.4	8.1	6.8	8.5
		Middle	5	26.7 26.7	29.1 29.2	7.83 7.83	61.2 60.2	4.17 4.09		7.8 7.7		8.6	
		Bottom	9	26.1 26.0	31.3 31.2	7.81 7.81	47.9 47.7	3.26 3.25	3.26	10.2 10.5		10.1	
	Other Observations:			Nil									
CS2	16:21	Surface	1	27.4 27.5	27.1 27.0	7.82 7.83	73.5 75.9	4.99 5.15	4.47	10.8 10.9	11.1	7.8	9.8
		Middle	5	26.6 26.7	30.0 30.1	7.82 7.81	57.3 56.9	3.89 3.86		12.7 13.0		10.2	
		Bottom	9	26.4 26.4	31.6 31.7	7.80 7.81	46.9 46.7	3.17 3.16	3.17	9.5 9.8		11.6	
	Other Observations:			Nil									
CS3	16:41	Surface	1	28.9 29.1	27.9 27.9	8.18 8.20	111.0 111.4	7.33 7.35	5.71	5.7 5.8	4.5	5.3	8.0
		Middle	11.5	25.2 25.3	34.8 34.6	7.80 7.81	61.5 62.3	4.06 4.11		3.2 3.1		8.0	
		Bottom	21.5	24.2 24.1	37.9 37.8	7.74 7.75	44.2 43.6	2.92 2.88	2.90	4.8 4.5		10.7	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 14/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	14:24	Surface	1	28.3 28.2	28.5 28.6	8.14 8.14	91.2 90.9	6.05 6.04	5.40	2.8 3.1	5.7	7.3	10.4
		Middle	11.5	27.3 27.2	29.5 29.6	7.99 7.97	70.9 70.9	4.75 4.76		4.3 4.1		10.7	
		Bottom	21.5	24.6 24.5	37.2 37.4	7.74 7.75	44.3 46.4	2.97 3.11	3.04	9.6 10.0		13.2	
	Other Observations:			Nil									
SR7	14:08	Surface	1	28.2 28.1	28.3 28.4	8.12 8.13	92.6 92.4	6.17 6.15	5.57	3.8 3.5	3.3	6.0	7.8
		Middle	4.5	27.5 27.5	29.5 29.4	7.99 7.98	74.8 74.0	5.01 4.95		3.4 3.3		8.0	
		Bottom	8	24.5 24.6	37.1 37.2	7.71 7.71	58.6 57.8	3.93 3.87	3.90	2.9 2.7		9.5	
	Other Observations:			Nil									
SR10	13:47	Surface	1	30.5 30.4	26.4 26.3	8.39 8.40	118.9 118.8	7.67 7.71	7.77	1.5 1.7	1.9	6.5	8.8
		Middle	4	29.7 29.7	27.5 27.5	8.37 8.36	120.2 120.3	7.84 7.85		2.2 2.1		9.1	
		Bottom	7	29.2 29.2	32.7 32.8	7.97 7.98	74.8 72.7	4.78 4.65	4.72	1.9 2.0		10.8	
	Other Observations:			Nil									
SR11	13:33	Surface	1	30.5 30.6	25.0 25.1	8.35 8.34	108.8 112.3	7.12 7.35	7.57	1.4 1.3	1.9	5.7	8.3
		Middle	4	30.0 29.9	26.7 26.8	8.44 8.44	121.8 120.0	7.97 7.83		1.9 2.0		8.2	
		Bottom	6.5	29.7 29.7	26.9 27.1	8.30 8.29	116.0 115.3	7.59 7.45	7.52	2.4 2.3		10.9	
	Other Observations:			Nil									
SR12	13:19	Surface	1	29.5 29.5	27.0 27.1	8.39 8.39	127.6 127.5	8.34 8.37	8.28	4.2 3.9	3.4	7.2	9.4
		Middle	4	29.5 29.4	27.1 27.2	8.36 8.37	125.2 124.9	8.22 8.20		3.6 3.5		9.7	
		Bottom	7	29.1 28.9	28.2 28.3	8.25 8.25	103.2 103.9	6.84 6.89	6.87	2.7 2.7		11.4	
	Other Observations:			Nil									
SR14	13:04	Surface	1	29.1 29.1	27.9 28.0	8.33 8.34	123.7 123.9	8.10 8.11	7.89	10.2 9.9	6.0	7.1	10.0
		Middle	4	28.8 28.8	28.1 28.2	8.30 8.31	116.1 116.5	7.67 7.69		4.8 5.0		10.2	
		Bottom	7	27.7 27.6	31.8 31.9	8.07 8.07	79.9 77.9	5.27 5.14	5.21	3.1 2.9		12.6	
	Other Observations:			Nil									
SR15	12:48	Surface	1	30.1 30.2	27.4 27.5	8.36 8.37	127.3 127.5	8.26 8.28	7.07	6.8 6.4	5.9	8.7	10.2
		Middle	10.5	26.1 25.9	35.9 36.1	7.87 7.89	88.4 89.6	5.83 5.91		4.2 4.5		10.4	
		Bottom	19.5	24.4 24.3	37.8 37.9	7.79 7.80	47.0 46.3	3.10 3.06	3.08	6.6 6.9		11.6	
	Other Observations:			Nil									
CS1	11:51	Surface	1	28.5 28.6	28.2 28.3	7.94 7.95	85.7 84.7	5.74 5.67	5.30	7.9 7.7	5.8	5.5	8.7
		Middle	5	27.3 27.4	29.3 29.4	7.93 7.93	73.9 72.3	4.95 4.84		5.2 4.9		9.0	
		Bottom	9	26.2 26.1	33.2 33.5	7.85 7.85	46.3 46.0	3.10 3.08	3.09	4.8 4.5		11.7	
	Other Observations:			Nil									
CS2	12:10	Surface	1	29.3 29.2	27.2 27.3	8.19 8.20	101.6 100.1	6.71 6.60	6.17	3.6 3.8	3.7	7.1	9.7
		Middle	5.5	27.9 27.8	28.7 28.7	8.06 8.05	84.8 85.0	5.68 5.69		3.4 3.5		9.9	
		Bottom	9.5	25.0 24.9	37.3 37.3	7.88 7.89	42.8 43.6	2.87 2.92	2.90	4.1 4.0		12.1	
	Other Observations:			Nil									
CS3	12:31	Surface	1	29.6 29.7	27.3 27.4	8.42 8.39	134.9 135.4	8.81 8.84	7.48	3.9 3.7	5.4	6.7	9.8
		Middle	10.5	25.8 25.9	34.2 34.3	7.98 7.98	94.5 93.3	6.17 6.09		2.0 2.1		10.1	
		Bottom	20	23.9 24.1	38.2 38.3	7.83 7.84	45.2 42.7	2.95 2.79	2.87	10.9 9.7		12.6	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 16/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	10:25	Surface	1	26.8 26.9	30.9 31.0	8.00 8.00	84.4 84.3	5.35 5.34	5.11	3.0 3.2	4.3	7.4	9.0
		Middle	11	25.7 25.7	35.1 35.1	7.96 7.96	77.2 77.0	4.87 4.86		3.4 3.3		8.9	
		Bottom	21	24.3 24.3	37.4 37.4	7.82 7.82	44.8 45.7	3.00 3.06	3.03	6.3 6.4		10.7	
	Other Observations:			Nil									
SR7	10:17	Surface	1	27.4 27.4	28.9 28.9	8.03 8.02	92.6 92.7	6.17 6.18	5.88	3.7 3.8	8.1	6.7	8.0
		Middle	5	27.1 27.0	29.4 29.4	7.81 7.82	84.1 86.2	5.61 5.56		9.3 8.3		7.9	
		Bottom	8.5	24.3 24.0	37.8 37.9	7.80 7.80	80.9 80.8	5.06 5.05	5.06	11.6 11.8		9.4	
	Other Observations:			Nil									
SR10	10:05	Surface	1	28.0 28.1	31.3 31.2	8.04 8.03	118.9 120.3	7.67 7.74	6.52	2.1 2.2	6.3	7.8	9.9
		Middle	4.5	27.1 27.1	33.4 33.4	7.90 7.91	84.6 84.2	5.32 5.33		5.2 6.2		10.0	
		Bottom	7.5	25.7 25.6	36.6 36.0	7.87 7.87	77.8 76.1	4.89 4.91	4.90	11.5 10.4		12.0	
	Other Observations:			Nil									
SR11	09:54	Surface	1	29.4 29.4	30.0 30.0	8.11 8.10	108.8 113.6	7.12 7.38	6.45	3.8 4.0	5.2	7.7	10.4
		Middle	4	27.0 27.0	34.3 34.4	7.94 7.93	88.1 89.3	5.60 5.68		4.8 5.1		10.7	
		Bottom	7	25.7 25.7	36.6 36.7	7.90 7.91	70.1 70.7	4.46 4.48	4.47	6.7 6.8		12.9	
	Other Observations:			Nil									
SR12	09:43	Surface	1	28.5 28.5	29.8 29.9	8.07 8.09	103.2 103.8	6.83 6.86	5.81	2.7 2.8	3.4	5.3	8.1
		Middle	4.5	26.7 26.8	34.8 34.8	7.97 7.96	76.6 76.1	4.78 4.76		3.3 3.4		7.9	
		Bottom	7.5	26.6 26.5	35.0 35.1	7.83 7.81	72.7 72.5	4.63 4.61	4.62	3.8 4.1		11.0	
	Other Observations:			Nil									
SR14	09:31	Surface	1	28.7 28.7	29.1 29.1	8.05 8.06	116.1 116.5	7.66 7.70	6.38	2.4 2.5	3.1	9.0	10.8
		Middle	6	26.8 26.8	34.1 34.1	7.97 7.96	79.1 80.1	5.06 5.09		3.2 3.4		10.8	
		Bottom	10.5	24.2 24.2	38.0 37.9	7.86 7.85	71.9 72.0	4.73 4.74	4.74	3.6 3.6		12.7	
	Other Observations:			Nil									
SR15	09:19	Surface	1	28.8 28.8	29.1 29.1	8.06 8.07	127.3 125.0	8.26 8.14	6.47	2.2 2.3	4.3	6.9	9.2
		Middle	11	26.1 26.1	36.1 36.1	8.01 8.00	76.6 76.0	4.74 4.73		4.3 4.6		9.3	
		Bottom	21	23.7 23.7	38.2 38.2	7.80 7.82	70.3 70.1	4.47 4.46	4.47	6.0 6.6		11.5	
	Other Observations:			Nil									
CS1	08:38	Surface	1	27.8 27.8	28.4 28.4	8.01 8.01	118.8 119.0	7.70 7.72	6.16	3.8 3.7	3.8	7.0	9.2
		Middle	5	26.7 26.7	32.6 32.6	7.90 7.91	72.6 72.5	4.62 4.61		3.6 3.3		9.6	
		Bottom	9	25.9 25.8	35.8 35.8	7.90 7.90	70.0 69.9	4.43 4.44	4.44	4.0 4.5		11.0	
	Other Observations:			Nil									
CS2	08:50	Surface	1	27.9 28.0	28.6 28.7	7.96 7.96	92.6 93.5	6.15 6.20	5.75	2.2 2.4	3.4	5.9	8.6
		Middle	6	27.3 27.3	32.3 32.4	7.79 7.79	84.6 84.9	5.32 5.34		3.1 3.5		8.9	
		Bottom	10.5	24.7 24.7	37.6 37.6	7.79 7.79	62.8 62.0	4.25 4.17	4.21	4.4 4.6		11.1	
	Other Observations:			Nil									
CS3	09:06	Surface	1	27.9 27.9	30.2 30.1	8.04 8.04	84.9 84.0	5.37 5.32	5.24	2.6 2.5	3.2	5.6	7.4
		Middle	11.5	24.6 24.6	37.8 37.8	7.84 7.84	80.7 81.5	5.09 5.16		3.1 3.2		6.5	
		Bottom	22	23.4 23.4	38.3 38.4	7.80 7.80	68.4 69.0	4.54 4.59	4.57	3.6 4.1		10.1	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 16/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	15:28	Surface	1	27.7 27.7	29.6 29.6	7.92 7.93	86.0 86.5	6.28 6.31	5.37	2.0 2.1	6.6	6.5	9.2
		Middle	11	26.7 26.7	32.2 32.2	7.88 7.88	70.0 69.9	4.44 4.43		3.1 3.3		8.9	
		Bottom	21	24.3 24.4	36.3 36.3	7.80 7.80	65.5 63.9	4.38 4.27	4.33	14.5 14.6		12.3	
	Other Observations:			Nil									
SR7	15:15	Surface	1	28.5 28.5	29.1 29.1	7.97 7.98	83.3 83.0	5.75 5.73	5.11	2.5 2.7	5.7	5.9	8.2
		Middle	4.5	27.2 27.3	31.0 30.9	7.90 7.91	70.2 70.4	4.48 4.49		3.4 3.6		8.1	
		Bottom	8	26.1 26.2	36.9 36.9	7.69 7.70	69.8 69.2	4.36 4.33	4.35	10.4 11.3		10.5	
	Other Observations:			Nil									
SR10	14:57	Surface	1	28.8 28.8	30.6 30.6	8.01 8.02	85.8 86.7	6.29 6.30	5.62	2.8 2.7	5.7	8.6	10.5
		Middle	4	28.5 28.5	31.4 31.4	8.00 7.99	78.3 77.7	5.00 4.90		2.9 2.8		10.3	
		Bottom	7	27.6 27.7	32.6 32.7	7.96 7.97	78.5 78.6	4.95 4.96	4.96	11.4 11.3		12.7	
	Other Observations:			Nil									
SR11	14:45	Surface	1	29.1 29.1	30.7 30.7	8.03 8.05	75.5 75.7	4.81 4.80	4.71	2.8 3.0	6.2	6.6	9.0
		Middle	4	28.9 28.9	30.7 30.8	8.01 8.00	74.5 73.8	4.64 4.60		8.2 9.2		8.9	
		Bottom	7	27.7 27.7	30.9 30.9	7.83 7.84	57.5 58.3	3.90 3.92	3.91	6.4 7.4		11.4	
	Other Observations:			Nil									
SR12	14:32	Surface	1	28.9 28.9	29.1 29.2	8.05 8.05	83.2 82.7	5.28 5.25	5.18	2.9 3.0	5.6	7.4	9.9
		Middle	4	28.3 28.3	29.4 29.3	8.01 8.01	78.8 78.4	5.11 5.08		3.2 3.1		9.7	
		Bottom	7	27.3 27.3	29.7 29.6	7.99 7.99	56.0 56.5	3.77 3.81	3.79	10.2 11.2		12.5	
	Other Observations:			Nil									
SR14	14:19	Surface	1	28.7 28.7	29.0 29.0	8.03 8.04	81.0 81.4	5.16 5.18	5.06	3.8 3.9	5.4	7.9	9.9
		Middle	4.5	28.7 28.7	29.1 29.1	8.04 8.05	78.3 77.7	5.00 4.90		4.3 4.3		9.8	
		Bottom	8	28.7 28.7	29.2 29.2	8.05 8.05	60.1 57.7	3.96 3.90	3.93	7.4 8.4		12.0	
	Other Observations:			Nil									
SR15	14:05	Surface	1	28.3 28.4	29.2 29.2	7.99 8.00	99.0 100.1	6.53 6.59	5.39	3.1 3.2	5.1	6.9	9.6
		Middle	10.5	27.5 27.5	33.8 33.8	7.98 7.99	82.4 82.6	4.21 4.22		3.3 3.4		9.8	
		Bottom	20	25.7 25.7	36.9 36.9	7.93 7.93	56.5 56.3	3.80 3.79	3.80	8.9 8.6		12.1	
	Other Observations:			Nil									
CS1	13:17	Surface	1	28.3 28.0	29.8 29.8	7.85 7.86	86.9 84.5	5.48 5.40	5.20	4.0 3.9	4.5	7.0	9.2
		Middle	4.5	26.3 26.2	32.1 32.2	7.84 7.84	78.8 78.5	4.98 4.95		4.0 4.4		9.7	
		Bottom	8	25.3 25.3	35.4 35.4	7.78 7.79	79.2 79.6	5.00 5.03	5.02	5.1 5.6		11.0	
	Other Observations:			Nil									
CS2	13:31	Surface	1	28.0 28.1	28.2 28.2	7.92 7.92	80.9 81.0	5.10 5.11	4.96	3.6 3.9	4.8	5.4	7.7
		Middle	5.5	27.1 27.1	31.6 31.6	7.89 7.88	75.5 75.6	4.81 4.82		4.9 5.1		7.8	
		Bottom	10	24.9 24.9	36.4 36.3	7.57 7.58	57.3 56.6	3.88 3.82	3.85	5.5 5.8		10.0	
	Other Observations:			Nil									
CS3	13:49	Surface	1	28.6 28.6	29.3 29.3	8.04 8.05	82.8 82.6	5.23 5.22	5.10	8.2 8.2	4.9	7.2	9.6
		Middle	11	27.4 27.4	35.1 35.1	8.00 7.99	78.8 78.5	4.98 4.95		3.0 3.2		9.7	
		Bottom	21	24.2 24.2	37.9 38.1	7.84 7.83	47.9 47.7	3.26 3.25	3.26	3.3 3.5		11.9	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 18/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	09:57	Surface	1	26.5 26.5	32.9 32.9	7.93 7.94	66.3 67.2	4.53 4.58	4.39	2.4 2.7	6.4	7.1	9.4
		Middle	11	24.2 24.2	40.8 40.6	7.90 7.91	63.0 63.3	4.23 4.24		5.7 6.0		9.5	
		Bottom	21	23.7 23.6	38.6 38.5	7.90 7.90	47.4 47.3	3.14 3.12	3.13	10.6 11.0		11.8	
	Other Observations:			Nil									
SR7	10:10	Surface	1	27.0 27.0	29.6 29.7	7.90 7.90	81.3 80.0	5.42 5.38	5.25	3.0 3.1	4.3	8.0	10.0
		Middle	5	26.9 26.9	34.3 34.5	7.90 7.89	78.3 78.0	5.11 5.10		3.0 3.1		10.1	
		Bottom	8.5	24.5 24.5	37.7 37.7	7.89 7.88	59.0 58.9	3.98 3.96	3.97	6.8 6.9		11.9	
	Other Observations:			Nil									
SR10	10:22	Surface	1	27.8 27.8	35.7 35.6	7.97 7.98	99.0 99.5	6.31 6.33	5.70	3.3 3.2	3.5	8.6	10.5
		Middle	4.5	25.7 25.7	37.0 37.1	7.92 7.91	78.0 76.5	5.10 5.04		2.7 2.8		9.8	
		Bottom	7.5	25.1 25.1	37.7 37.7	7.91 7.90	58.5 57.5	3.90 3.77	3.84	4.5 4.6		13.1	
	Other Observations:			Nil									
SR11	10:40	Surface	1	27.4 27.5	34.2 34.3	7.94 7.94	92.9 92.0	6.14 6.10	5.43	6.1 6.0	6.2	6.7	8.5
		Middle	4	26.0 25.9	36.9 37.0	7.94 7.93	71.0 72.5	4.70 4.77		5.9 5.9		7.9	
		Bottom	7	25.0 24.9	37.6 37.7	7.87 7.89	60.9 57.1	3.98 3.73	3.86	6.5 6.9		10.9	
	Other Observations:			Nil									
SR12	10:55	Surface	1	27.8 27.7	33.2 33.1	8.00 7.99	87.0 88.2	5.59 5.62	5.19	6.2 6.1	6.7	7.8	10.5
		Middle	4.5	26.1 26.0	36.5 36.6	7.94 7.92	73.2 71.7	4.80 4.75		5.2 5.3		10.5	
		Bottom	8	25.5 25.5	36.9 37.0	7.91 7.91	60.9 57.1	3.98 3.73	3.86	8.6 8.9		13.1	
	Other Observations:			Nil									
SR14	11:09	Surface	1	28.1 28.0	32.9 33.0	8.00 8.01	88.0 86.9	5.55 5.64	5.35	3.8 3.7	4.9	6.8	8.7
		Middle	6	27.2 27.2	33.2 33.3	7.97 7.98	79.0 78.3	5.11 5.10		2.4 2.5		8.5	
		Bottom	10.5	23.6 23.6	38.3 38.2	7.88 7.89	60.3 60.1	4.00 3.97	3.99	8.4 8.5		10.9	
	Other Observations:			Nil									
SR15	11:27	Surface	1	28.7 28.8	30.8 30.8	8.01 8.01	99.3 98.7	6.30 6.21	5.65	1.4 1.5	2.7	6.5	8.9
		Middle	11	24.4 24.5	38.0 38.0	7.91 7.92	77.6 77.5	5.05 5.05		1.6 1.6		8.7	
		Bottom	21	23.4 23.5	38.9 39.0	7.89 7.89	38.7 39.0	2.65 2.66	2.66	4.9 5.0		11.6	
	Other Observations:			Nil									
CS1	08:50	Surface	1	26.9 27.0	30.6 30.6	7.91 7.90	79.3 78.5	5.12 5.10	4.80	3.6 3.4	4.4	6.8	9.2
		Middle	5.5	26.2 26.2	33.6 33.6	7.92 7.92	66.2 65.0	4.52 4.47		3.3 3.2		9.6	
		Bottom	9.5	24.1 24.1	37.9 38.0	7.90 7.89	39.3 39.0	2.66 2.64	2.65	6.4 6.6		11.3	
	Other Observations:			Nil									
CS2	09:13	Surface	1	28.0 28.0	29.5 29.6	7.91 7.92	77.5 78.6	5.05 5.10	5.24	3.8 3.6	2.5	5.6	8.4
		Middle	6.5	26.9 27.0	37.2 37.2	7.96 7.97	80.6 81.3	5.37 5.43		1.8 1.9		8.5	
		Bottom	11.5	24.6 24.6	37.9 37.9	7.88 7.87	36.2 35.5	2.43 2.40	2.42	1.9 2.0		11.0	
	Other Observations:			Nil									
CS3	09:35	Surface	1	28.7 28.7	30.9 30.9	8.02 8.02	77.7 77.5	5.06 5.05	3.91	1.5 1.6	2.7	8.1	10.3
		Middle	11.5	24.5 24.4	37.9 38.0	7.90 7.90	41.3 41.0	2.77 2.75		1.6 1.6		10.6	
		Bottom	22	23.4 23.4	39.0 38.9	7.88 7.89	38.8 38.6	2.65 2.64	2.65	4.8 5.0		12.4	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 18/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	15:30	Surface	1	28.1 28.0	32.5 32.6	7.93 7.94	66.8 66.5	4.42 4.40	4.31	4.7 4.6	11.2	5.3	7.4
		Middle	11	24.2 24.3	37.9 38.0	7.87 7.88	63.6 62.8	4.26 4.15		13.7 13.6		7.5	
		Bottom	20.5	24.1 24.0	38.0 38.0	7.85 7.86	50.3 51.6	3.31 3.38	3.35	15.6 15.2		9.6	
	Other Observations:			Nil									
SR7	15:46	Surface	1	28.4 28.4	29.9 29.9	8.00 7.98	99.3 99.5	6.31 6.33	5.56	2.7 2.8	5.4	8.3	10.3
		Middle	4.5	27.7 27.6	31.5 31.5	7.94 7.95	73.1 72.6	4.82 4.79		2.9 3.0		9.8	
		Bottom	8	27.6 27.6	33.2 33.2	7.96 7.96	63.9 63.8	4.19 4.18	4.19	10.8 10.2		12.8	
	Other Observations:			Nil									
SR10	16:00	Surface	1	28.7 28.7	33.9 34.0	7.94 7.94	81.6 82.0	5.44 5.45	5.27	2.5 2.6	3.6	6.8	8.3
		Middle	4	25.9 25.9	36.9 37.0	7.91 7.90	78.1 78.0	5.10 5.09		3.3 3.2		8.4	
		Bottom	7	24.5 24.5	37.9 37.9	7.87 7.88	68.0 67.6	4.40 4.35	4.38	5.0 5.0		9.6	
	Other Observations:			Nil									
SR11	16:18	Surface	1	29.2 29.2	31.7 31.6	8.07 8.06	87.1 86.9	5.60 5.58	5.07	1.9 2.0	5.1	5.3	7.5
		Middle	4	28.4 28.3	33.6 33.6	8.00 8.01	70.6 70.0	4.56 4.52		3.2 3.0		6.8	
		Bottom	6.5	27.9 27.9	34.5 34.5	8.02 8.02	68.7 68.9	4.46 4.47	4.47	10.1 10.2		10.5	
	Other Observations:			Nil									
SR12	16:34	Surface	1	29.6 29.7	30.2 30.2	8.12 8.12	99.0 99.3	6.30 6.31	6.00	3.7 3.8	6.0	7.5	9.5
		Middle	4	29.4 29.4	30.8 30.9	8.09 8.09	88.3 88.2	5.70 5.69		3.2 3.3		9.3	
		Bottom	7	29.2 29.2	31.8 31.8	8.04 8.04	78.9 78.7	5.08 5.07	5.08	11.2 11.0		11.8	
	Other Observations:			Nil									
SR14	16:52	Surface	1	29.0 29.1	31.2 31.2	8.19 8.19	103.2 103.3	6.65 6.68	6.12	5.8 5.9	10.5	6.3	8.4
		Middle	5	28.1 28.1	32.9 33.0	8.11 8.11	85.9 85.1	5.59 5.54		13.6 14.0		8.6	
		Bottom	8.5	27.8 27.8	33.6 33.6	8.05 8.06	76.4 76.4	4.98 4.97	4.98	11.2 12.2		10.3	
	Other Observations:			Nil									
SR15	17:18	Surface	1	28.5 28.5	31.6 31.6	8.15 8.16	100.0 101.1	6.53 6.54	5.97	2.7 2.6	7.4	7.3	9.1
		Middle	10.5	26.8 26.6	35.7 35.7	8.00 8.01	80.3 81.5	5.38 5.43		8.2 7.2		9.5	
		Bottom	20	24.4 24.5	38.0 38.0	7.91 7.91	42.3 41.9	2.85 2.82	2.84	12.3 11.6		10.5	
	Other Observations:			Nil									
CS1	14:30	Surface	1	26.9 26.8	31.5 31.4	7.94 7.93	80.2 80.4	5.36 5.37	4.77	4.2 4.1	3.5	5.9	7.8
		Middle	5	26.4 26.4	32.8 32.9	7.89 7.90	62.3 62.2	4.18 4.17		3.1 3.2		8.0	
		Bottom	8.5	25.6 25.5	37.5 37.5	7.80 7.80	43.8 43.3	2.90 2.87	2.89	3.0 3.1		9.5	
	Other Observations:			Nil									
CS2	14:49	Surface	1	27.3 27.3	30.6 30.5	8.02 8.03	80.5 81.1	5.37 5.41	4.79	10.0 9.6	7.3	8.7	10.8
		Middle	5.5	26.2 26.2	35.9 35.9	7.94 7.93	63.0 62.1	4.21 4.17		4.8 4.7		10.7	
		Bottom	10	24.4 24.4	38.0 38.0	7.87 7.86	53.6 51.8	3.54 3.43	3.49	7.9 7.0		13.1	
	Other Observations:			Nil									
CS3	15:11	Surface	1	28.3 28.3	29.5 29.5	8.11 8.10	92.7 92.9	6.13 6.14	5.30	7.0 6.8	5.3	6.3	8.7
		Middle	11	24.6 24.5	37.9 38.0	7.90 7.91	68.7 69.0	4.46 4.48		2.0 1.9		8.7	
		Bottom	20.5	23.7 23.7	38.1 38.2	7.83 7.83	39.5 39.2	2.69 2.65	2.67	7.0 6.9		11.1	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 21/7/2003
Weather: Overcast
Sea Condition: Moderate
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	12:49	Surface	1	28.1 28.2	32.0 32.0	8.30 8.30	84.4 84.3	5.49 5.47	5.29	2.1 2.2	2.1	5.4	8.0
		Middle	11.5	27.3 27.2	32.3 32.3	8.28 8.28	76.9 76.8	5.10 5.08		2.0 2.1		7.4	
		Bottom	21.5	27.2 27.2	32.3 32.2	8.18 8.18	74.0 73.8	5.00 4.98	4.99	2.0 2.0		11.2	
	Other Observations:			Nil									
SR7	12:39	Surface	1	28.1 28.2	32.0 32.0	8.30 8.29	85.6 85.5	5.59 5.58	5.32	2.1 1.9	2.0	8.6	10.4
		Middle	5	27.2 27.2	32.5 32.5	8.18 8.17	76.5 76.3	5.06 5.04		2.1 2.1		10.6	
		Bottom	8.5	27.1 27.1	32.7 32.7	8.16 8.15	73.3 73.2	4.91 4.86	4.89	2.0 2.0		12.0	
	Other Observations:			Nil									
SR10	12:30	Surface	1	28.1 28.1	32.5 32.5	8.19 8.20	83.7 83.8	5.44 5.45	5.39	6.8 6.8	10.4	6.3	8.3
		Middle	4.5	28.2 28.1	32.5 32.5	8.19 8.20	81.8 81.7	5.34 5.33		10.3 10.3		8.5	
		Bottom	7.5	28.0 28.0	32.3 32.3	8.18 8.18	81.4 81.3	5.21 5.20	5.21	14.0 14.0		10.0	
	Other Observations:			Nil									
SR11	12:18	Surface	1	28.2 28.2	32.3 32.3	8.21 8.21	85.3 85.2	5.56 5.55	5.50	5.8 5.8	6.6	9.0	11.3
		Middle	4	28.0 28.1	38.1 38.1	8.20 8.20	83.6 83.3	5.45 5.44		6.8 6.8		11.6	
		Bottom	7	28.1 27.9	37.9 38.0	8.18 8.18	83.1 83.0	5.41 5.40	5.41	7.3 7.3		13.3	
	Other Observations:			Nil									
SR12	11:55	Surface	1	28.1 28.1	32.4 32.4	8.24 8.25	87.9 87.9	5.74 5.74	5.65	3.0 3.1	2.4	5.9	8.3
		Middle	4.5	27.9 27.9	32.5 32.5	8.22 8.21	85.3 84.4	5.58 5.55		2.2 2.2		8.5	
		Bottom	7.5	27.8 27.9	32.6 32.6	8.21 8.21	81.9 81.7	5.39 5.36	5.38	1.9 1.9		10.4	
	Other Observations:			Nil									
SR14	11:40	Surface	1	28.0 28.0	32.5 32.5	8.25 8.24	88.0 87.9	5.75 5.73	5.68	2.0 2.1	1.6	8.6	9.8
		Middle	6	27.8 27.8	32.5 32.5	8.22 8.22	85.9 85.4	5.63 5.60		1.7 1.7		9.6	
		Bottom	10.5	27.8 27.8	32.4 32.4	8.22 8.22	84.2 84.2	5.52 5.51	5.52	1.1 1.0		11.3	
	Other Observations:			Nil									
SR15	11:24	Surface	1	28.0 28.1	32.7 32.7	8.26 8.26	88.5 89.5	5.65 5.67	5.55	1.4 1.3	2.4	7.7	10.4
		Middle	11	28.0 28.0	32.1 32.0	8.20 8.20	84.3 84.1	5.46 5.42		1.4 1.4		10.6	
		Bottom	21	27.0 27.0	32.0 32.1	8.12 8.12	78.9 78.8	5.02 5.01	5.02	4.3 4.7		13.1	
	Other Observations:			Nil									
CS1	10:25	Surface	1	27.7 27.7	31.7 31.7	8.23 8.24	88.1 88.0	5.81 5.80	5.73	1.3 1.4	1.8	6.1	7.8
		Middle	5	27.6 27.6	31.8 31.8	8.21 8.21	85.6 85.5	5.66 5.65		1.8 1.9		7.8	
		Bottom	9	27.1 27.1	32.2 32.2	8.13 8.14	77.8 77.6	5.16 5.50	5.33	2.2 2.3		9.4	
	Other Observations:			Nil									
CS2	10:40	Surface	1	28.4 28.4	32.4 32.4	8.27 8.28	90.2 90.4	5.86 5.87	5.88	1.8 1.8	3.4	6.5	8.5
		Middle	6.5	28.3 28.3	32.3 32.3	8.30 8.30	90.6 90.4	5.89 5.89		1.3 1.3		8.3	
		Bottom	11.5	28.1 28.1	32.3 32.3	8.29 8.29	89.1 89.0	5.82 5.81	5.82	6.9 7.0		10.9	
	Other Observations:			Nil									
CS3	11:04	Surface	1	28.3 28.4	32.6 32.6	8.23 8.24	88.6 88.7	5.66 5.68	5.56	1.4 1.4	2.4	7.2	9.6
		Middle	11.5	27.9 27.8	32.1 32.1	8.18 8.17	84.2 84.1	5.46 5.44		1.6 1.6		9.6	
		Bottom	22	26.4 26.5	32.1 32.0	8.10 8.10	78.8 78.2	5.01 4.92	4.97	4.1 4.0		12.0	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 21/7/2003
Weather: Overcast
Sea Condition: Moderate
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	18:35	Surface	1	28.0 28.0	32.5 32.4	8.19 8.20	88.6 88.8	5.78 5.79	5.34	2.7 2.8	3.5	7.4	9.4
		Middle	11	27.2 27.2	33.0 33.0	8.05 8.06	72.9 72.8	4.89 4.88		2.9 2.8		9.0	
		Bottom	21	26.0 26.1	34.0 34.1	7.98 8.00	59.7 59.6	4.03 4.02	4.03	4.9 4.8		11.8	
	Other Observations:			Nil									
SR7	18:18	Surface	1	28.3 28.3	32.4 32.4	8.17 8.17	86.5 86.6	5.63 5.64	5.61	5.0 4.9	4.7	5.4	7.7
		Middle	4.5	28.0 28.0	32.6 32.6	8.19 8.19	85.2 85.0	5.60 5.55		4.4 4.3		7.1	
		Bottom	8	27.8 27.8	32.3 32.2	8.20 8.20	76.6 76.5	4.90 4.88	4.89	4.8 4.9		10.7	
	Other Observations:			Nil									
SR10	17:55	Surface	1	28.5 28.5	32.5 32.5	8.19 8.20	85.2 85.4	5.52 5.53	5.50	5.2 5.1	6.4	6.6	8.8
		Middle	4	28.5 28.5	32.5 32.5	8.18 8.18	84.3 84.4	5.46 5.47		6.9 7.0		9.5	
		Bottom	7	28.4 28.4	32.7 32.7	8.16 8.16	80.5 79.8	5.25 5.22	5.24	7.1 7.2		10.3	
	Other Observations:			Nil									
SR11	17:35	Surface	1	28.5 28.5	32.8 32.8	8.26 8.25	87.5 87.8	5.68 5.70	5.60	1.6 1.7	4.1	8.7	10.9
		Middle	4	28.0 27.9	32.4 32.5	8.18 8.17	84.3 81.1	5.52 5.48		4.7 4.7		11.5	
		Bottom	6.5	27.0 27.0	32.0 32.0	8.08 8.06	75.8 75.6	5.10 5.08	5.09	5.9 5.9		12.5	
	Other Observations:			Nil									
SR12	17:19	Surface	1	28.4 28.4	32.6 32.6	8.24 8.26	87.7 88.0	5.71 5.73	5.67	1.9 1.9	2.9	7.1	10.0
		Middle	4	28.1 28.0	32.3 32.3	8.24 8.23	86.5 81.4	5.62 5.60		2.0 1.9		10.2	
		Bottom	7	27.6 27.5	32.1 32.1	8.09 8.10	78.9 78.8	5.09 5.08	5.09	4.8 4.8		12.8	
	Other Observations:			Nil									
SR14	17:05	Surface	1	28.2 28.2	32.8 32.8	8.20 8.19	87.9 87.7	5.70 5.71	5.67	1.7 1.8	2.4	8.6	9.9
		Middle	5	28.2 28.2	32.8 32.8	8.21 8.20	86.7 86.4	5.63 5.64		2.7 2.5		9.9	
		Bottom	8.5	28.1 28.0	33.0 33.1	8.20 8.19	80.2 80.2	5.24 5.24	5.24	2.9 3.0		11.2	
	Other Observations:			Nil									
SR15	16:50	Surface	1	28.5 28.4	32.5 32.6	8.21 8.20	95.8 96.0	6.28 6.29	6.20	1.7 1.7	1.5	6.9	9.0
		Middle	10.5	28.0 28.1	32.0 32.0	8.17 8.18	95.4 95.6	6.11 6.13		1.5 1.4		9.0	
		Bottom	19.5	27.1 27.0	32.0 32.1	8.08 8.09	88.9 89.1	5.71 5.74	5.73	1.4 1.3		11.0	
	Other Observations:			Nil									
CS1	16:00	Surface	1	28.2 28.3	32.3 32.3	8.20 8.21	87.7 87.9	5.73 5.74	5.80	4.0 4.1	4.3	5.6	8.3
		Middle	5	28.1 28.0	32.2 32.2	8.19 8.20	89.8 89.6	5.87 5.86		4.8 4.9		7.8	
		Bottom	8.5	27.3 27.3	32.6 32.5	8.10 8.11	75.6 75.8	5.18 5.19	5.19	3.9 3.8		11.5	
	Other Observations:			Nil									
CS2	16:18	Surface	1	28.7 28.7	32.3 32.3	8.30 8.29	95.5 95.3	6.16 6.14	6.05	6.9 7.1	6.1	8.6	10.3
		Middle	5.5	28.6 28.4	32.5 32.5	8.26 8.24	91.5 91.1	5.96 5.94		4.0 4.0		9.7	
		Bottom	10	27.4 27.5	32.3 32.3	8.11 8.10	81.6 81.3	5.57 5.54	5.56	7.4 7.3		12.7	
	Other Observations:			Nil									
CS3	16:35	Surface	1	28.8 28.9	32.4 32.4	8.28 8.29	96.0 96.0	6.26 6.25	6.17	7.8 7.7	6.5	5.9	8.0
		Middle	11	28.0 28.1	32.1 32.2	8.21 8.22	95.0 94.8	6.10 6.08		4.4 4.4		8.2	
		Bottom	20.5	27.2 27.1	32.5 32.4	8.11 8.09	89.9 89.6	5.82 5.80	5.81	7.4 7.2		10.1	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 26/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	12:32	Surface	1	29.0 29.1	36.2 36.3	8.12 8.11	85.3 85.1	5.30 5.31	4.97	4.2 4.3	5.6	7.9	10.2
		Middle	11	28.0 28.1	36.7 36.9	7.99 7.98	72.1 72.0	4.64 4.63		4.3 4.0		10.6	
		Bottom	20.5	27.3 27.1	37.3 37.2	7.83 7.82	55.3 56.1	3.58 3.63	3.61	8.5 8.2		12.1	
	Other Observations:			Nil									
SR7	12:10	Surface	1	28.9 28.8	36.0 36.0	8.10 8.10	83.8 82.0	5.20 5.16	5.16	4.4 4.3	6.4	6.0	8.4
		Middle	4.5	28.7 28.5	36.3 36.5	8.08 8.07	80.0 80.6	5.12 5.14		5.4 5.3		8.1	
		Bottom	8	28.0 28.2	37.0 37.1	8.00 8.00	63.0 62.7	4.09 4.08	4.09	9.1 9.7		11.0	
	Other Observations:			Nil									
SR10	11:55	Surface	1	29.3 29.2	36.4 36.5	8.09 8.08	86.7 86.1	5.43 5.41	5.33	2.9 2.7	5.8	6.9	8.9
		Middle	4	28.9 28.9	36.4 36.3	8.06 8.07	83.6 85.2	5.18 5.30		6.3 6.5		8.9	
		Bottom	7	28.0 28.1	36.6 36.7	7.95 7.96	61.4 61.0	4.01 3.98	4.00	8.4 8.2		11.0	
	Other Observations:			Nil									
SR11	11:43	Surface	1	29.7 29.7	36.3 36.2	8.19 8.18	88.1 87.8	5.50 5.47	5.36	3.7 3.5	4.4	5.9	8.5
		Middle	4	28.8 28.6	36.3 36.4	8.08 8.09	83.7 85.2	5.18 5.30		3.3 3.0		8.5	
		Bottom	7	28.1 28.0	36.5 36.5	7.90 7.91	60.0 60.3	3.86 3.87	3.87	6.6 6.3		11.0	
	Other Observations:			Nil									
SR12	11:28	Surface	1	29.1 29.2	36.3 36.3	8.10 8.09	87.5 87.1	5.49 5.51	5.34	3.7 3.8	4.5	7.5	9.0
		Middle	4.5	28.3 28.3	36.3 36.2	8.06 8.07	81.8 81.1	5.20 5.16		3.6 3.6		9.3	
		Bottom	7.5	28.2 28.0	36.5 36.6	7.92 7.93	60.9 61.2	3.92 3.93	3.93	6.0 6.5		10.4	
	Other Observations:			Nil									
SR14	11:10	Surface	1	29.2 29.3	36.1 36.1	8.07 8.08	83.6 83.3	5.35 5.34	5.28	3.0 2.9	3.9	8.9	10.6
		Middle	5.5	27.5 27.5	36.3 36.3	8.06 8.06	82.9 83.3	5.20 5.22		3.2 3.5		10.5	
		Bottom	10	27.5 27.6	36.8 36.8	7.98 7.96	57.9 57.8	3.71 3.70	3.71	5.3 5.6		12.5	
	Other Observations:			Nil									
SR15	10:55	Surface	1	30.3 30.5	36.0 36.1	8.12 8.11	82.0 82.8	5.05 5.10	5.04	2.8 2.9	6.0	7.8	10.2
		Middle	11	28.3 28.2	36.3 36.2	8.09 8.08	81.1 81.0	5.00 5.00		7.2 7.6		10.7	
		Bottom	21	26.7 26.9	36.6 36.5	7.88 7.86	55.8 56.2	3.70 3.73	3.72	7.7 8.0		12.1	
	Other Observations:			Nil									
CS1	09:50	Surface	1	28.2 28.0	31.9 31.9	8.12 8.10	90.0 91.1	6.11 6.16	5.72	3.8 3.7	5.8	5.8	7.8
		Middle	5.5	27.3 27.3	34.2 34.2	7.93 7.92	83.8 82.8	5.34 5.28		6.5 6.6		7.5	
		Bottom	10	26.3 26.2	34.7 34.7	7.90 7.89	54.5 54.7	3.59 3.60	3.60	7.1 7.0		10.2	
	Other Observations:			Nil									
CS2	10:15	Surface	1	28.2 28.1	36.1 36.1	8.13 8.14	96.0 96.5	6.50 6.52	5.85	2.8 3.0	3.4	6.9	9.2
		Middle	6	27.7 27.7	36.4 36.4	8.03 8.02	83.7 85.2	5.18 5.20		3.3 3.6		8.9	
		Bottom	11	26.6 26.5	36.6 36.6	7.92 7.89	57.5 56.6	3.70 3.64	3.67	3.8 4.1		11.8	
	Other Observations:			Nil									
CS3	10:38	Surface	1	28.9 28.9	36.1 36.1	8.14 8.12	89.5 89.0	6.02 6.00	5.58	2.8 2.6	3.9	6.0	8.3
		Middle	12	28.0 28.1	36.2 36.2	8.00 8.01	79.8 80.0	5.14 5.15		3.8 3.9		8.7	
		Bottom	23	26.6 26.5	36.4 36.4	7.87 7.89	60.6 59.4	3.89 3.82	3.86	5.0 5.3		10.4	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 26/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	18:38	Surface	1	28.2 28.3	35.7 35.8	8.08 8.08	72.1 71.8	4.64 4.59	4.61	3.0 3.2	3.9	5.5	7.9
		Middle	10.5	27.7 27.7	36.2 36.3	8.11 8.10	71.9 71.7	4.60 4.59		3.8 3.6		7.8	
		Bottom	20	26.6 26.5	36.4 36.4	7.96 7.95	61.4 60.9	3.94 3.92	3.93	4.8 5.1		10.5	
	Other Observations:			Nil									
SR7	18:20	Surface	1	28.2 28.1	35.9 35.8	8.14 8.14	92.0 92.5	6.26 6.28	5.57	3.8 3.6	4.5	8.5	10.0
		Middle	4.5	27.9 27.9	36.4 36.3	8.13 8.14	72.1 71.8	4.89 4.86		4.2 4.5		9.3	
		Bottom	8	27.1 27.1	36.8 36.6	8.00 8.00	57.9 57.1	3.71 3.66	3.69	5.1 5.6		12.1	
	Other Observations:			Nil									
SR10	18:07	Surface	1	28.3 28.2	36.3 36.2	8.02 8.01	98.9 98.0	6.70 6.65	5.77	6.5 6.6	8.6	6.6	8.6
		Middle	4	27.8 27.8	36.4 36.3	8.00 8.00	71.7 72.0	4.86 4.88		8.8 8.9		8.8	
		Bottom	7	27.2 27.3	36.6 36.5	7.95 7.95	57.2 56.9	3.69 3.68	3.69	10.2 10.7		10.4	
	Other Observations:			Nil									
SR11	17:55	Surface	1	28.4 28.4	36.1 36.1	8.05 8.06	90.3 91.8	6.08 6.25	5.51	3.8 4.0	4.4	8.7	10.6
		Middle	4	27.6 27.6	36.2 36.2	8.02 8.01	71.7 73.0	4.82 4.88		4.5 4.3		10.3	
		Bottom	6.5	27.1 27.1	36.5 36.5	8.00 8.00	59.3 59.4	3.80 3.81	3.81	4.9 5.1		12.9	
	Other Observations:			Nil									
SR12	17:37	Surface	1	28.7 28.7	36.2 36.3	8.08 8.08	89.5 90.3	6.03 6.07	5.32	3.7 3.5	4.6	7.6	9.0
		Middle	4	28.0 28.1	36.4 36.5	8.07 8.06	71.9 71.7	4.60 4.59		3.9 4.0		8.6	
		Bottom	7	27.4 27.4	36.7 36.7	8.01 8.01	59.8 60.0	3.81 3.82	3.82	6.2 6.0		10.9	
	Other Observations:			Nil									
SR14	17:18	Surface	1	28.5 28.2	36.3 36.3	8.06 8.07	101.6 103.3	6.86 6.98	5.58	4.3 4.1	4.4	8.4	10.5
		Middle	4.5	27.4 27.4	36.5 36.5	8.02 8.03	62.7 63.5	4.21 4.25		4.6 4.8		10.8	
		Bottom	8	26.7 26.9	36.5 36.5	8.00 8.01	57.9 58.2	3.72 3.75	3.74	4.1 4.6		12.4	
	Other Observations:			Nil									
SR15	17:03	Surface	1	28.4 28.4	36.2 36.2	8.08 8.07	96.8 97.1	6.55 6.57	5.74	4.3 4.6	5.5	6.9	8.2
		Middle	10.5	28.2 28.2	36.3 36.3	8.05 8.04	73.3 72.0	4.95 4.88		5.0 5.4		7.5	
		Bottom	19.5	27.3 27.2	36.3 36.3	8.00 8.00	59.8 59.8	3.83 3.84	3.84	6.6 6.9		10.1	
	Other Observations:			Nil									
CS1	16:05	Surface	1	27.1 27.1	35.2 35.2	8.01 8.01	91.8 93.2	6.26 6.31	5.94	4.4 4.5	5.0	7.5	9.0
		Middle	4.5	26.8 26.9	34.9 34.9	8.00 7.99	89.1 89.0	5.60 5.59		4.8 4.8		9.2	
		Bottom	8	26.5 26.4	35.7 35.7	7.98 7.99	56.8 57.7	3.71 3.75	3.73	5.7 6.0		10.4	
	Other Observations:			Nil									
CS2	16:27	Surface	1	28.1 28.1	36.3 36.2	8.09 8.09	96.6 98.0	6.54 6.60	5.74	2.7 2.8	4.1	6.9	9.4
		Middle	5.5	27.5 27.5	36.4 36.4	8.07 8.07	71.7 73.2	4.86 4.95		3.4 3.6		9.7	
		Bottom	10	27.0 27.1	36.5 36.5	8.03 8.02	59.3 58.1	3.81 3.74	3.78	5.9 6.0		11.5	
	Other Observations:			Nil									
CS3	16:52	Surface	1	28.4 28.3	36.2 36.2	8.09 8.08	90.0 94.2	6.10 6.30	5.67	3.9 4.0	6.2	7.6	9.3
		Middle	10.5	27.8 27.8	36.3 36.3	8.06 8.05	75.0 76.8	5.10 5.18		5.4 5.3		9.5	
		Bottom	19.5	27.0 27.0	36.3 36.3	8.00 8.00	59.2 59.3	3.80 3.81	3.81	9.0 9.4		11.0	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 28/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	18:51	Surface	1	28.3 28.3	30.2 30.2	8.07 8.07	97.9 97.3	6.45 6.41	6.30	3.7 3.8	5.4	6.0	8.5
		Middle	11.5	28.2 28.3	32.4 32.3	8.04 8.04	94.9 94.7	6.18 6.17		5.8 5.9		8.0	
		Bottom	21.5	28.1 28.0	34.5 34.5	8.04 8.04	91.5 91.0	5.90 5.87	5.89	6.7 6.6		11.5	
	Other Observations:			Nil									
SR7	18:35	Surface	1	28.3 28.3	29.4 29.4	8.00 8.00	101.0 100.6	6.69 6.66	6.60	6.5 6.5	6.6	8.5	10.4
		Middle	5	28.2 28.3	29.9 29.9	8.00 8.01	98.5 98.4	6.53 6.50		6.6 6.5		10.0	
		Bottom	8.5	28.2 28.1	30.3 30.4	8.00 8.01	98.0 98.1	6.45 6.46	6.46	6.6 6.7		12.7	
	Other Observations:			Nil									
SR10	18:15	Surface	1	29.8 29.8	33.1 33.1	8.31 8.30	149.8 149.6	9.48 9.47	9.23	5.0 5.2	7.2	5.9	7.6
		Middle	4.5	29.5 29.4	33.7 33.7	8.23 8.23	142.7 140.4	9.03 8.95		4.7 4.8		7.5	
		Bottom	7.5	28.2 28.1	36.2 36.2	8.05 8.05	97.4 95.3	6.22 6.19	6.21	11.8 11.6		9.6	
	Other Observations:			Nil									
SR11	17:59	Surface	1	29.8 29.8	32.4 32.4	8.39 8.38	174.4 175.2	10.90 11.10	8.59	4.9 4.8	6.7	7.3	10.0
		Middle	4	28.2 28.2	36.3 36.3	8.08 8.09	96.4 96.3	6.18 6.17		4.4 4.3		10.1	
		Bottom	7	28.1 28.1	36.3 36.3	8.02 8.01	83.0 83.6	5.30 5.34	5.32	11.0 10.9		12.7	
	Other Observations:			Nil									
SR12	17:44	Surface	1	30.0 30.1	33.1 33.1	8.22 8.22	138.7 139.2	8.74 8.75	7.48	4.0 4.2	5.3	6.1	7.9
		Middle	4.5	29.0 29.0	36.1 36.1	8.11 8.10	97.8 96.2	6.24 6.18		5.5 5.6		8.1	
		Bottom	7.5	28.1 28.2	36.2 36.2	8.05 8.06	90.9 90.6	5.81 5.78	5.80	6.2 6.3		9.6	
	Other Observations:			Nil									
SR14	17:28	Surface	1	29.1 29.1	32.4 32.4	8.18 8.18	127.2 127.6	8.16 8.19	7.14	4.9 4.7	7.5	6.5	9.7
		Middle	6	28.1 28.2	36.1 36.1	8.15 8.16	95.9 92.7	6.13 6.09		5.9 6.1		10.1	
		Bottom	10.5	27.8 27.8	36.4 36.4	8.04 8.04	86.9 86.7	5.57 5.56	5.57	11.7 11.9		12.5	
	Other Observations:			Nil									
SR15	17:10	Surface	1	29.2 29.2	31.9 31.8	8.22 8.21	140.1 142.3	8.92 9.01	7.55	3.9 3.9	6.5	6.9	9.0
		Middle	11	27.9 27.9	36.4 36.4	8.05 8.06	96.6 94.3	6.19 6.08		5.6 5.7		8.8	
		Bottom	21	27.7 27.7	36.5 36.5	8.02 8.01	86.2 86.0	5.53 5.52	5.53	9.9 10.0		11.5	
	Other Observations:			Nil									
CS1	16:10	Surface	1	28.0 28.1	30.2 30.3	8.01 8.00	93.9 93.2	6.30 6.20	6.05	10.8 10.7	13.3	5.9	8.3
		Middle	5.5	27.7 27.7	31.4 31.4	7.95 7.96	89.2 88.4	5.88 5.83		12.8 12.7		8.5	
		Bottom	9.5	27.7 27.6	32.6 32.6	7.92 7.92	82.4 82.0	5.40 5.38	5.39	16.1 16.5		10.5	
	Other Observations:			Nil									
CS2	16:32	Surface	1	28.3 28.4	30.9 30.9	7.99 7.99	98.8 98.5	6.48 6.43	6.23	7.0 7.0	8.4	6.0	8.0
		Middle	6.5	27.9 27.8	32.8 33.0	7.99 8.00	91.9 91.7	6.00 5.99		6.8 6.9		7.9	
		Bottom	11.5	27.8 27.8	35.7 35.7	7.99 7.99	85.7 85.5	5.53 5.50	5.52	11.2 11.4		10.1	
	Other Observations:			Nil									
CS3	16:53	Surface	1	29.8 29.9	31.7 31.7	8.29 8.29	152.4 152.7	9.75 9.76	8.39	3.5 3.3	3.4	8.4	10.4
		Middle	12	28.3 28.3	35.9 35.9	8.08 8.08	108.8 107.1	7.07 6.96		3.6 3.7		10.7	
		Bottom	22.5	27.7 27.7	36.5 36.5	8.04 8.03	91.8 88.9	5.93 5.83	5.88	3.2 3.3		12.2	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 28/7/2003
Weather: Sunny
Sea Condition: Calm
Tide: Mid-Ebb

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	13:30	Surface	1	28.2 28.2	32.2 32.3	8.08 8.08	92.7 91.1	6.02 5.97	6.04	4.2 4.2	5.6	6.3	8.9
		Middle	11	28.2 28.2	34.6 34.4	8.09 8.09	94.9 94.6	6.09 6.08		3.8 3.9		8.6	
		Bottom	21	28.5 28.6	35.4 35.5	8.11 8.10	96.2 96.8	6.13 6.16	6.15	8.9 8.7		11.8	
	Other Observations:			Nil									
SR7	13:20	Surface	1	28.4 28.3	32.4 32.4	8.13 8.12	91.9 93.5	5.99 6.09	6.19	3.3 3.3	3.3	9.1	11.4
		Middle	4.5	29.0 29.0	34.0 34.1	8.17 8.16	98.5 100.1	6.29 6.37		3.2 3.4		11.6	
		Bottom	7.5	29.0 29.0	34.6 34.7	8.17 8.16	104.0 104.1	6.59 6.61	6.60	3.5 3.3		13.7	
	Other Observations:			Nil									
SR10	13:05	Surface	1	30.5 30.4	34.4 34.3	8.18 8.18	123.4 120.6	7.66 7.49	6.68	3.9 4.0	5.1	6.6	8.4
		Middle	4	28.0 28.0	36.3 36.3	8.07 8.06	91.1 89.1	5.83 5.75		4.0 4.1		8.4	
		Bottom	7	27.9 27.9	36.4 36.4	8.04 8.02	84.6 84.4	5.41 5.40	5.41	7.3 7.2		10.2	
	Other Observations:			Nil									
SR11	12:51	Surface	1	29.1 29.1	32.2 32.1	8.25 8.25	146.5 148.1	9.29 9.38	7.67	2.9 3.0	5.1	6.5	8.7
		Middle	4	28.5 28.4	36.1 36.2	8.06 8.06	98.1 97.9	6.01 6.00		3.3 3.3		8.0	
		Bottom	7	28.0 28.1	36.4 36.5	8.03 8.02	83.5 83.4	5.34 5.33	5.34	9.0 9.1		11.6	
	Other Observations:			Nil									
SR12	12:36	Surface	1	28.7 28.8	32.1 32.1	8.21 8.20	141.1 140.1	9.14 9.06	8.10	8.0 8.1	5.7	5.5	7.8
		Middle	4	28.1 28.0	35.9 35.9	8.06 8.06	111.3 111.1	7.10 7.08		5.3 5.2		8.0	
		Bottom	7	27.9 27.9	36.4 36.3	8.03 8.02	89.0 88.3	5.70 5.66	5.68	3.7 3.8		10.1	
	Other Observations:			Nil									
SR14	12:21	Surface	1	29.2 29.2	32.1 32.1	8.18 8.17	130.4 132.0	8.37 8.42	8.35	3.5 3.4	3.3	8.5	10.8
		Middle	5	28.6 28.5	33.0 33.1	8.18 8.17	128.3 128.6	8.30 8.31		3.2 3.3		10.9	
		Bottom	8.5	28.3 28.2	35.7 35.6	8.08 8.07	100.4 100.2	6.47 6.40	6.44	3.1 3.2		12.9	
	Other Observations:			Nil									
SR15	12:10	Surface	1	28.8 28.8	32.5 32.5	8.15 8.15	124.0 123.4	8.05 7.95	7.16	5.0 5.4	9.0	6.9	9.4
		Middle	10.5	28.1 28.1	36.2 36.3	8.06 8.08	98.7 96.8	6.40 6.22		4.0 4.2		9.5	
		Bottom	20	27.8 27.8	37.8 37.8	8.03 8.01	86.5 86.3	5.57 5.54	5.56	18.0 17.6		11.7	
	Other Observations:			Nil									
CS1	11:10	Surface	1	27.7 27.7	31.7 31.8	7.98 7.99	91.1 89.9	6.01 5.93	5.94	4.0 4.0	5.9	5.5	8.5
		Middle	5	27.2 27.3	32.7 32.7	7.97 7.97	90.7 89.9	5.94 5.89		3.7 3.8		8.6	
		Bottom	8.5	27.6 27.5	35.0 35.0	7.97 7.96	89.1 87.6	5.77 5.69	5.73	9.9 9.8		11.5	
	Other Observations:			Nil									
CS2	11:30	Surface	1	29.0 29.0	31.9 31.9	8.02 8.03	104.6 104.9	6.78 6.81	6.64	3.1 3.3	3.9	6.9	9.7
		Middle	5.5	27.9 27.9	33.9 33.9	7.98 7.99	99.4 97.7	6.58 6.40		3.7 3.6		9.6	
		Bottom	9.5	27.9 27.9	36.4 36.5	8.01 8.01	95.7 93.7	6.13 6.08	6.11	4.6 4.8		12.7	
	Other Observations:			Nil									
CS3	11:55	Surface	1	28.4 28.4	34.5 34.5	8.15 8.15	126.1 126.4	7.94 7.99	6.99	4.2 4.2	3.6	7.5	9.8
		Middle	11	27.7 27.7	36.4 36.4	8.03 8.04	90.9 90.5	6.04 6.00		2.6 2.7		9.7	
		Bottom	20.5	27.1 27.1	37.4 37.5	7.98 7.99	84.7 84.6	5.50 5.49	5.50	3.9 4.0		12.4	
	Other Observations:			Nil									

* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

Date: 31/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Flood

Water Quality Monitoring Result

Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	10:10	Surface	1	29.4 29.4	31.6 31.7	8.17 8.16	98.8 97.9	6.31 6.25	5.98	3.5 3.4	7.4	8.8	11.0
		Middle	12	29.2 29.2	32.5 32.5	8.12 8.12	88.8 88.7	5.67 5.68		4.0 3.8		11.2	
		Bottom	22.5	27.6 27.5	35.9 35.9	8.04 8.03	75.3 72.9	4.88 4.72	4.80	14.8 15.1		13.1	
	Other Observations:			Nil									
SR7	10:02	Surface	1	28.9 28.9	31.7 31.8	8.16 8.16	94.4 95.5	6.06 6.13	5.99	3.6 3.4	6.3	5.9	8.1
		Middle	6	29.0 29.0	32.9 33.0	8.16 8.16	90.8 91.5	5.87 5.91		4.4 4.3		8.4	
		Bottom	10.5	27.4 27.3	36.7 36.7	8.07 8.06	78.0 76.3	5.04 4.93	4.99	11.4 10.8		10.0	
	Other Observations:			Nil									
SR10	09:53	Surface	1	29.4 29.5	32.7 32.7	8.17 8.18	107.1 107.6	6.79 6.82	6.18	1.9 1.8	3.1	7.8	9.5
		Middle	4.5	28.9 29.0	34.8 34.9	8.08 8.07	87.9 86.5	5.59 5.50		2.8 3.0		9.3	
		Bottom	8	28.1 27.9	36.1 36.0	8.03 8.02	74.1 73.5	4.77 4.73	4.75	4.6 4.5		11.3	
	Other Observations:			Nil									
SR11	09:42	Surface	1	29.7 29.6	32.2 32.1	8.25 8.26	115.5 116.4	7.34 7.40	6.75	1.6 1.8	5.6	7.1	9.1
		Middle	4	28.8 28.7	34.8 34.9	8.16 8.15	96.5 95.4	6.17 6.10		2.0 2.1		9.5	
		Bottom	7	28.1 28.1	35.7 35.6	8.03 8.02	77.5 76.6	4.98 4.92	4.95	13.5 12.7		10.7	
	Other Observations:			Nil									
SR12	09:32	Surface	1	29.9 29.9	32.1 32.1	8.27 8.26	118.5 119.4	7.54 7.61	6.35	1.6 1.7	5.4	5.8	7.5
		Middle	4.5	28.3 28.1	35.9 36.0	8.05 8.04	81.0 78.9	5.19 5.06		5.2 5.6		7.2	
		Bottom	7.5	27.9 27.9	36.3 36.4	8.02 8.01	71.7 70.8	4.61 4.56	4.59	9.0 9.5		9.5	
	Other Observations:			Nil									
SR14	09:21	Surface	1	29.1 29.2	32.0 32.1	8.28 8.26	117.7 120.1	7.55 7.70	7.71	1.7 1.8	2.7	8.3	10.5
		Middle	5.5	29.0 29.1	32.4 32.5	8.26 8.25	121.8 121.1	7.81 7.77		2.2 2.2		10.5	
		Bottom	10	28.0 27.9	36.0 35.9	8.04 8.05	83.4 80.6	5.36 5.18	5.27	4.1 4.4		12.7	
	Other Observations:			Nil									
SR15	09:09	Surface	1	28.6 28.6	34.4 34.3	8.12 8.13	96.1 96.4	6.15 6.18	5.54	1.8 2.0	5.3	6.8	8.9
		Middle	11.5	27.8 27.7	36.8 36.9	8.04 8.03	74.4 77.6	4.81 5.02		2.2 2.3		8.9	
		Bottom	21.5	26.5 26.3	37.7 37.8	7.94 7.95	64.0 61.7	4.19 4.04	4.12	12.1 11.4		11.2	
	Other Observations:			Nil									
CS1	08:32	Surface	1	28.8 28.7	31.0 31.1	8.07 8.08	95.9 93.7	6.24 6.10	5.78	3.1 3.0	3.5	7.5	9.0
		Middle	5.5	28.4 28.3	32.4 32.5	8.05 8.04	91.4 89.4	4.95 5.82		3.6 3.8		9.1	
		Bottom	9.5	28.2 28.2	34.5 34.5	8.10 8.12	72.0 72.4	4.69 4.71	4.70	3.7 3.5		10.4	
	Other Observations:			Nil									
CS2	08:44	Surface	1	29.3 29.3	31.3 31.4	8.14 8.14	100.4 123.7	6.46 6.68	6.08	2.9 2.5	3.0	6.4	7.8
		Middle	6	28.7 28.7	31.8 31.8	8.11 8.10	85.5 88.1	5.50 5.67		3.2 3.2		7.8	
		Bottom	10.5	28.1 28.1	35.1 35.3	8.01 8.01	78.1 78.0	5.02 5.01	5.02	3.1 3.0		9.4	
	Other Observations:			Nil									
CS3	08:59	Surface	1	29.1 29.0	32.6 32.7	8.18 8.19	108.8 109.7	6.99 7.04	6.15	1.7 1.9	2.6	5.6	7.9
		Middle	12	27.9 27.8	36.1 36.0	8.05 8.04	81.5 82.6	5.24 5.31		1.1 1.3		7.8	
		Bottom	22.5	27.1 27.3	37.2 37.1	7.96 7.97	67.5 66.9	4.47 4.37	4.42	5.0 4.7		10.5	
	Other Observations:			Nil									

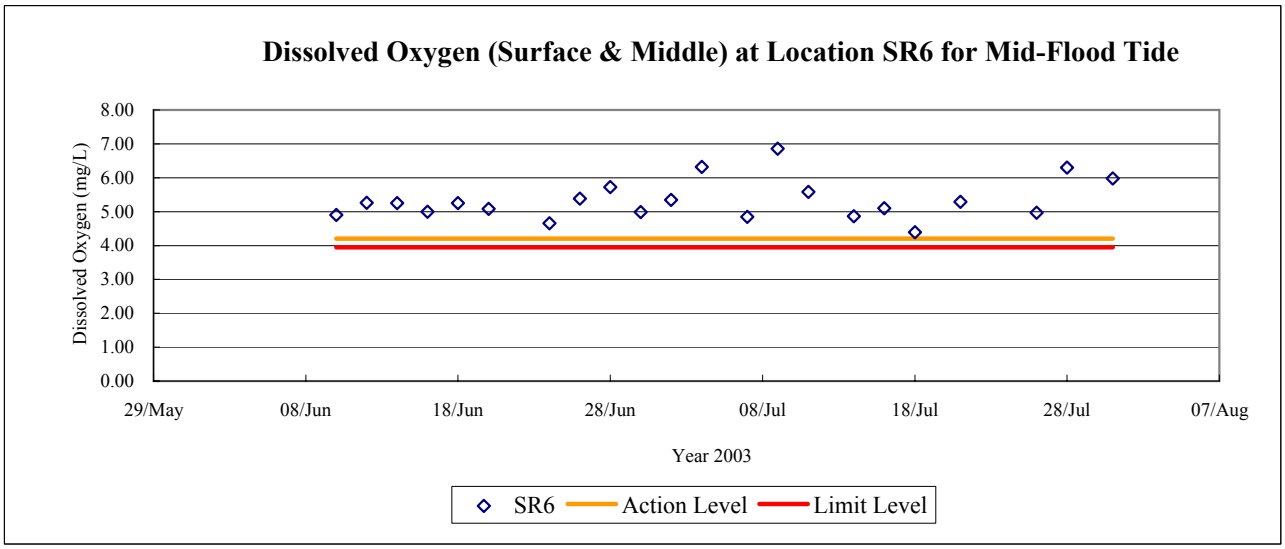
* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

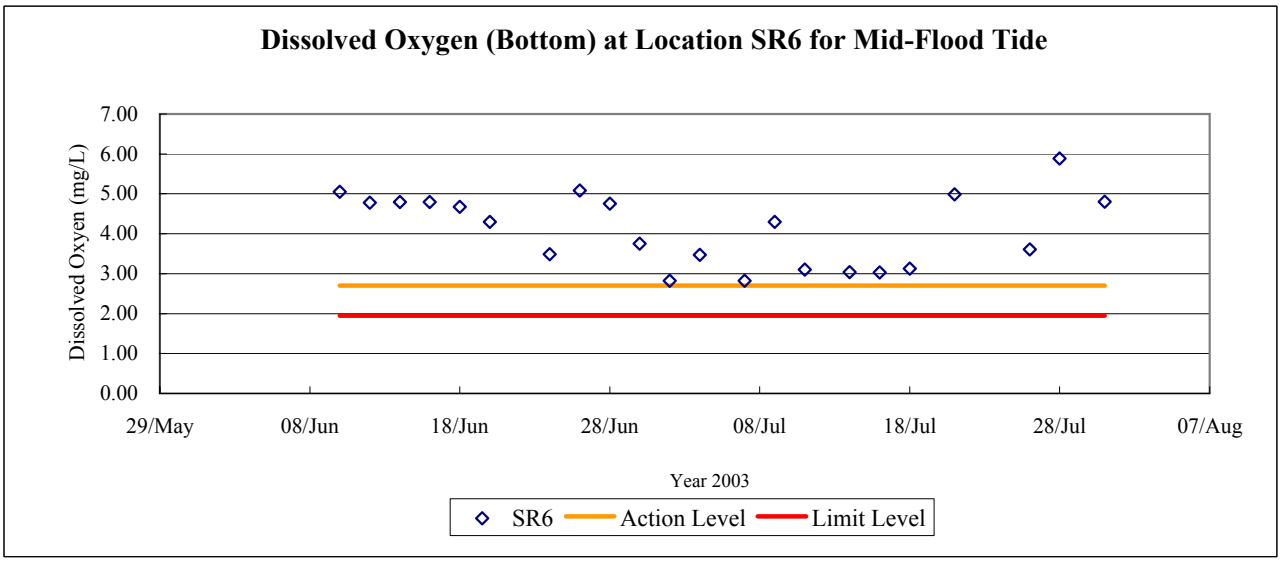
Date: 31/7/2003
Weather: Sunny
Sea Condition: Moderate
Tide: Mid-Ebb

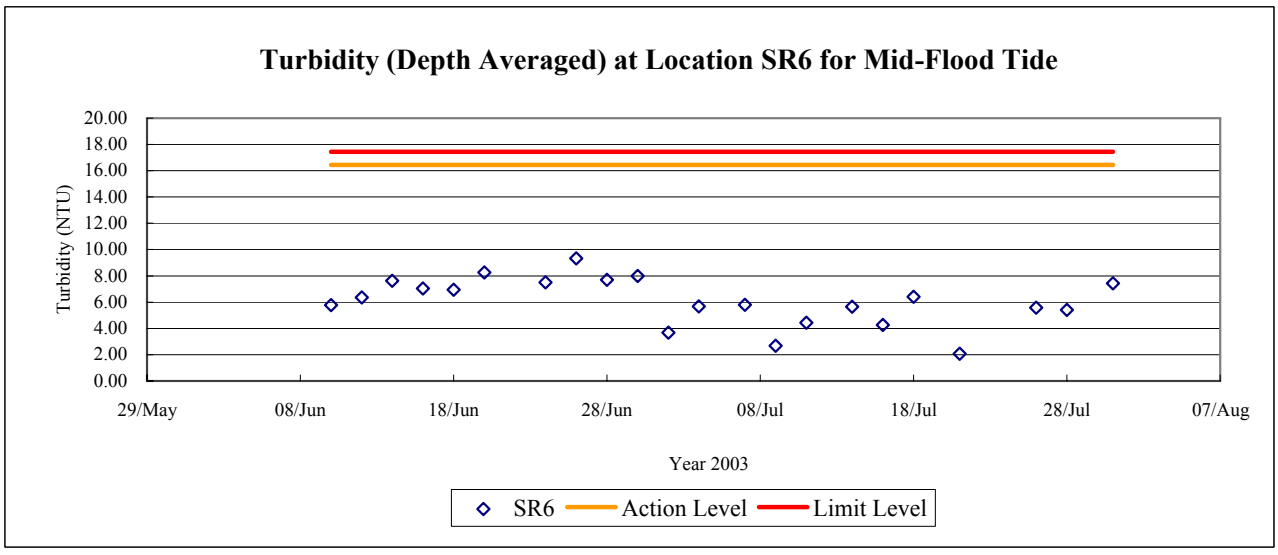
Water Quality Monitoring Result

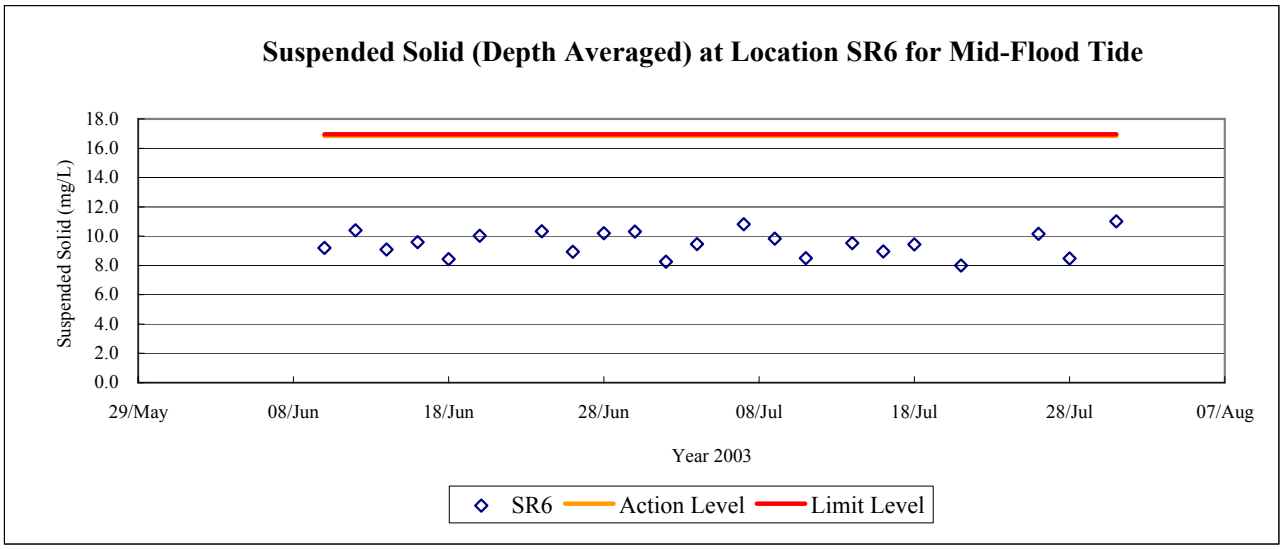
Location	Time	Depth (m)		Temp. (°C)	Salinity (ppt)	pH	D.O. Sat. (%)	D.O. (mg/L)		Turbidity (NTU)		S.S. (mg/L)	
								Value	DA	Value	DA	Average	DA
SR6	15:17	Surface	1	28.4 28.6	32.2 32.1	8.09 8.10	99.5 100.4	6.42 6.48	5.99	4.4 4.2	7.7	6.6	9.4
		Middle	11	28.2 28.1	34.2 34.2	8.04 8.05	86.0 85.5	5.55 5.52		8.5 8.1		9.4	
		Bottom	20.5	27.2 27.2	35.6 35.5	7.89 7.89	65.2 66.6	4.21 4.30	4.26	10.7 10.4		12.3	
	Other Observations:			Nil									
SR7	14:56	Surface	1	29.3 29.4	31.3 31.2	8.08 8.09	103.0 102.8	6.62 6.61	6.51	3.0 3.1	3.2	7.5	9.7
		Middle	5.5	28.8 28.7	31.7 31.8	8.10 8.10	99.2 98.8	6.42 6.40		3.2 3.2		9.6	
		Bottom	9.5	28.6 28.6	32.1 32.2	8.11 8.12	90.5 88.5	5.86 5.73	5.80	3.4 3.3		12.0	
	Other Observations:			Nil									
SR10	14:39	Surface	1	31.2 31.1	33.4 33.5	8.16 8.16	105.4 105.7	6.44 6.48	6.18	2.8 2.7	3.9	6.7	8.7
		Middle	4	30.8 30.9	34.5 34.4	8.10 8.09	95.6 94.8	5.91 5.88		4.2 4.4		8.8	
		Bottom	7	28.4 28.2	36.0 36.1	8.05 8.04	81.4 77.9	5.03 4.82	4.93	4.5 4.7		10.5	
	Other Observations:			Nil									
SR11	14:24	Surface	1	30.4 30.5	32.4 32.4	8.22 8.22	115.0 115.5	7.21 7.24	7.28	2.1 2.0	3.4	6.1	8.6
		Middle	4	30.6 30.6	32.3 32.3	8.25 8.25	116.8 116.9	7.32 7.33		1.8 1.7		8.4	
		Bottom	6.5	29.3 29.4	34.9 35.0	8.17 8.16	95.7 96.8	6.08 6.15	6.12	6.6 6.4		11.4	
	Other Observations:			Nil									
SR12	14:09	Surface	1	30.3 30.4	32.0 32.0	8.24 8.25	121.2 122.8	7.60 7.71	7.85	1.7 1.9	2.3	8.0	10.3
		Middle	4	30.1 30.0	32.4 32.4	8.28 8.27	127.4 128.0	8.01 8.07		2.8 2.7		10.3	
		Bottom	7	27.9 27.8	36.3 36.4	8.04 8.05	82.2 78.1	5.17 4.91	5.04	2.3 2.3		12.5	
	Other Observations:			Nil									
SR14	13:56	Surface	1	30.2 30.3	32.0 32.1	8.25 8.25	120.6 121.4	7.60 7.65	7.50	2.0 2.1	2.3	9.4	11.5
		Middle	5	30.2 30.1	32.1 32.1	8.22 8.21	117.0 116.5	7.39 7.37		2.4 2.5		11.7	
		Bottom	9	29.9 29.9	33.2 33.2	8.24 8.23	113.5 111.3	7.17 7.03	7.10	2.4 2.4		13.6	
	Other Observations:			Nil									
SR15	13:42	Surface	1	29.6 29.7	32.5 32.6	8.27 8.28	122.6 126.7	7.75 8.01	6.50	2.9 3.1	7.8	7.0	9.0
		Middle	11	27.7 27.7	36.4 36.5	8.03 8.03	80.6 77.8	5.20 5.02		6.0 6.2		9.4	
		Bottom	20.5	26.4 26.5	37.5 37.6	7.95 7.96	62.1 63.5	4.04 4.13	4.09	14.5 13.9		10.8	
	Other Observations:			Nil									
CS1	13:04	Surface	1	29.1 29.2	31.3 31.4	8.04 8.04	93.4 94.2	6.08 6.14	5.85	3.6 3.5	3.9	5.9	7.7
		Middle	5	28.5 28.5	32.0 32.1	8.03 8.03	86.7 86.2	5.61 5.58		4.1 4.2		7.7	
		Bottom	8.5	28.2 28.2	33.7 33.8	8.01 8.00	81.4 81.1	5.30 5.28	5.29	4.0 3.9		9.5	
	Other Observations:			Nil									
CS2	13:19	Surface	1	29.9 30.0	32.1 32.1	8.27 8.26	124.8 126.7	7.89 8.00	7.22	1.7 1.8	4.3	8.0	10.3
		Middle	5.5	29.1 29.0	32.0 32.1	8.13 8.12	101.8 99.2	6.58 6.42		2.1 2.0		10.5	
		Bottom	9.5	28.1 28.2	36.1 36.1	8.00 7.99	69.5 66.8	4.48 4.30	4.39	9.2 8.9		12.4	
	Other Observations:			Nil									
CS3	13:26	Surface	1	29.6 29.6	31.8 31.7	8.25 8.26	125.1 126.0	7.99 8.06	6.84	8.5 8.2	7.3	8.7	10.1
		Middle	11	27.4 27.4	36.7 36.8	8.03 8.02	90.0 86.7	5.75 5.54		2.6 2.4		10.1	
		Bottom	21	26.2 26.3	37.7 37.7	8.00 7.98	66.1 64.1	4.31 4.18	4.25	10.7 11.5		11.4	
	Other Observations:			Nil									

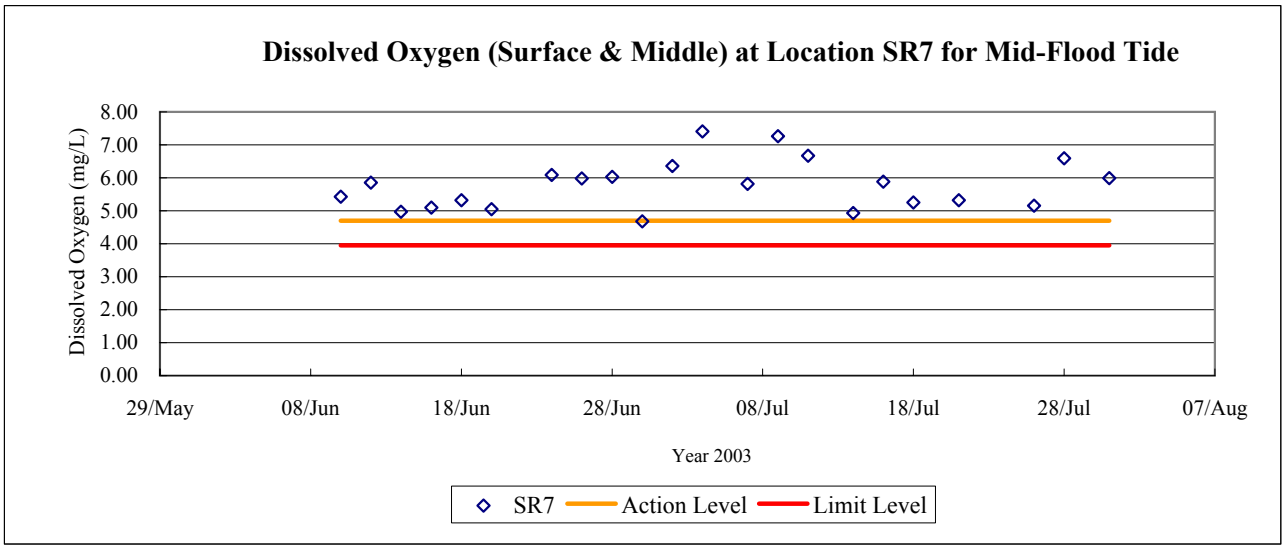
* Contains sample results < detection limit but assumed to be at the detection limit for the sake of computation.

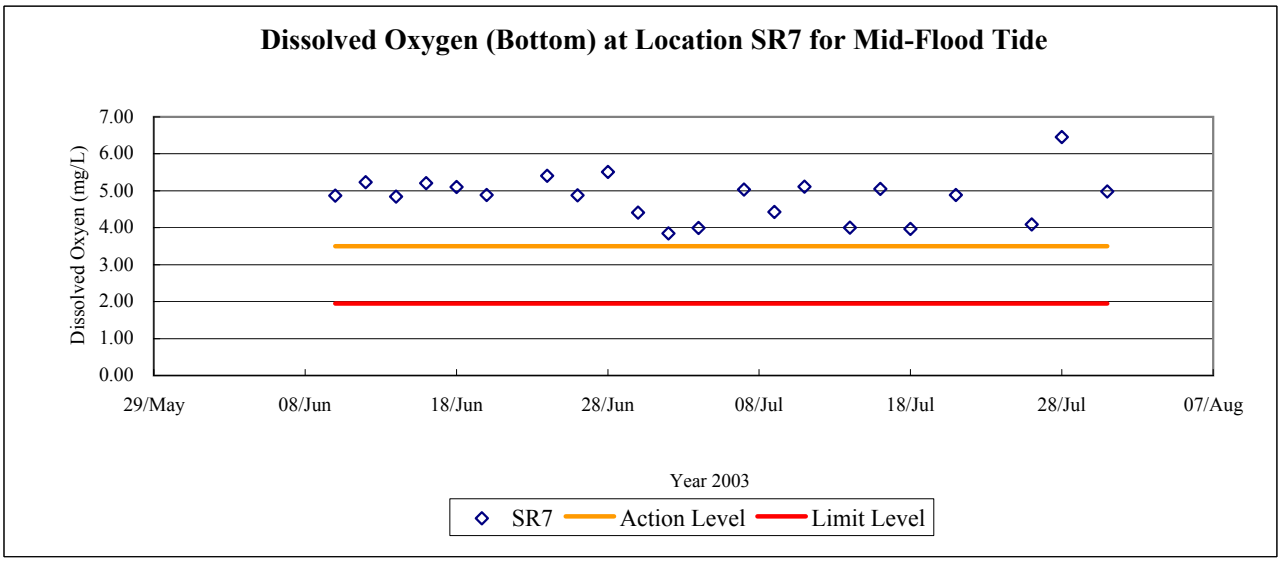

Dissolved Oxygen (Surface & Middle) at Location SR6 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

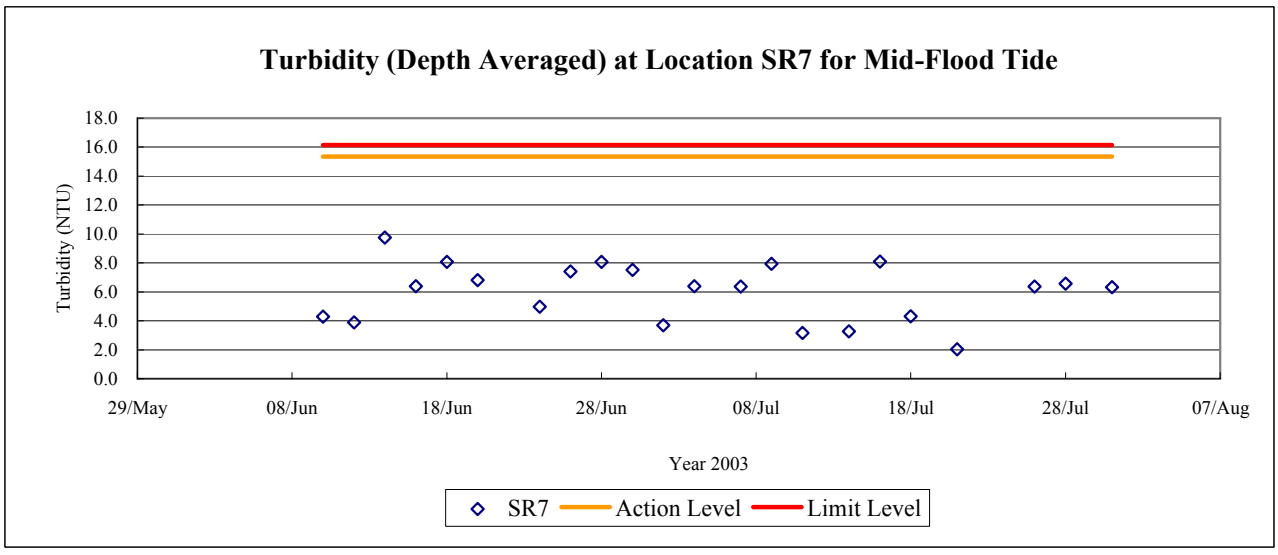

Dissolved Oxygen (Bottom) at Location SR6 for Mid-Flood Tide
Dissolved Oxyen (mg/L)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

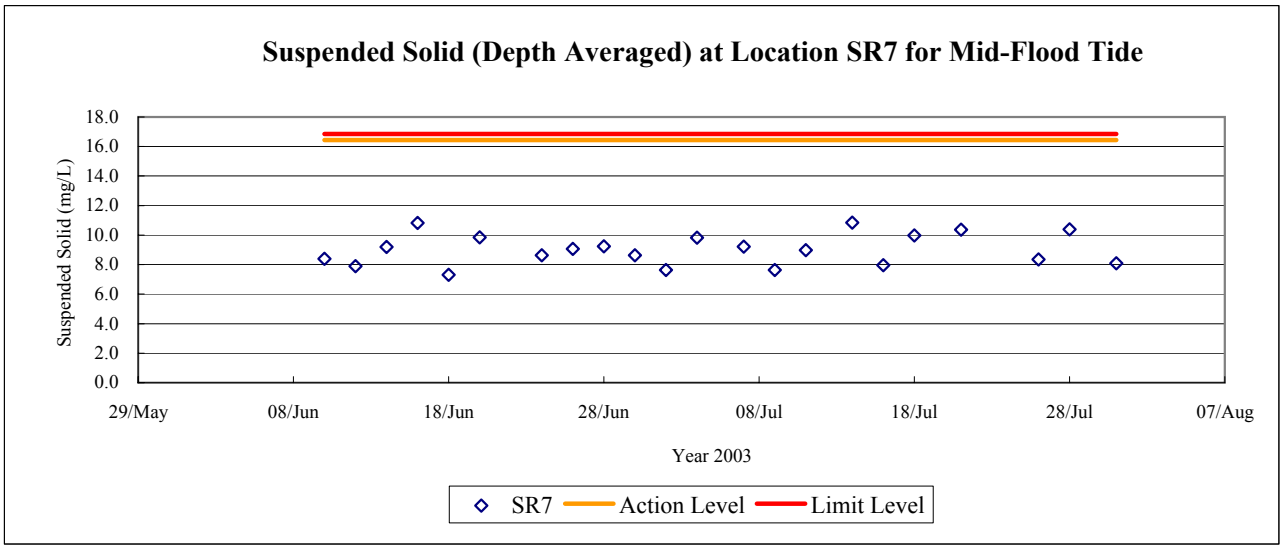

Turbidity (Depth Averaged) at Location SR6 for Mid-Flood Tide
Turbidity (NTU)
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

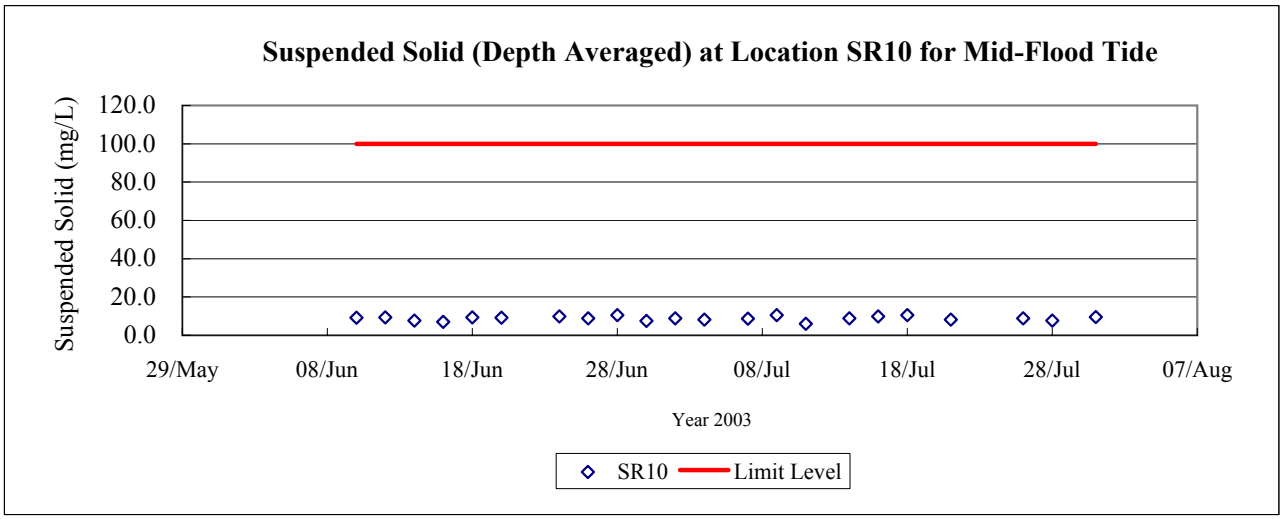

Suspended Solid (Depth Averaged) at Location SR6 for Mid-Flood Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

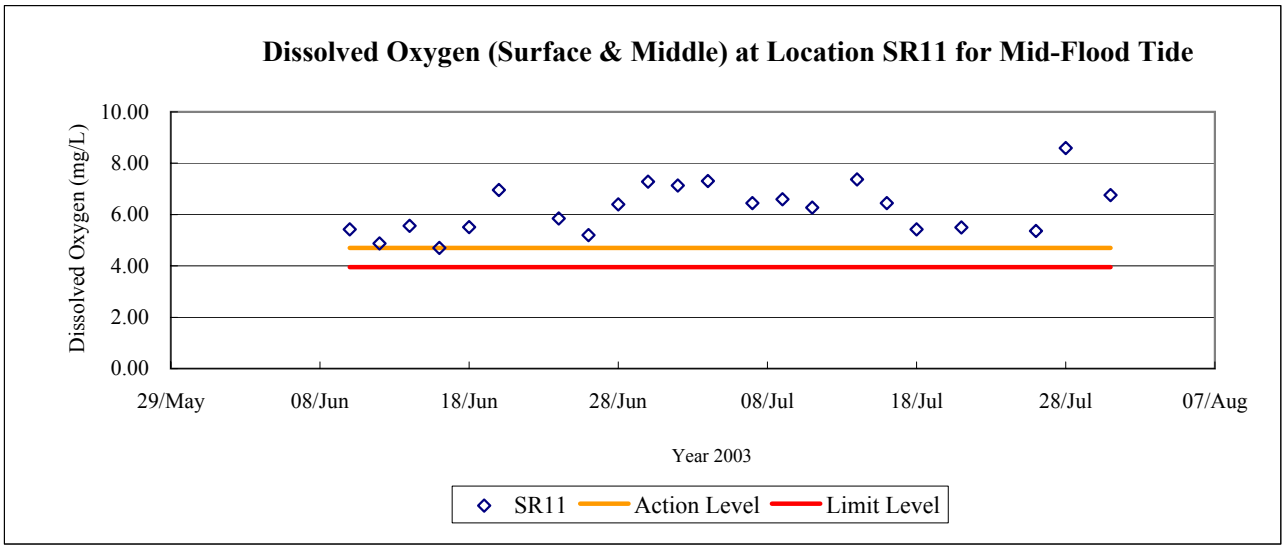

Dissolved Oxygen (Surface & Middle) at Location SR7 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

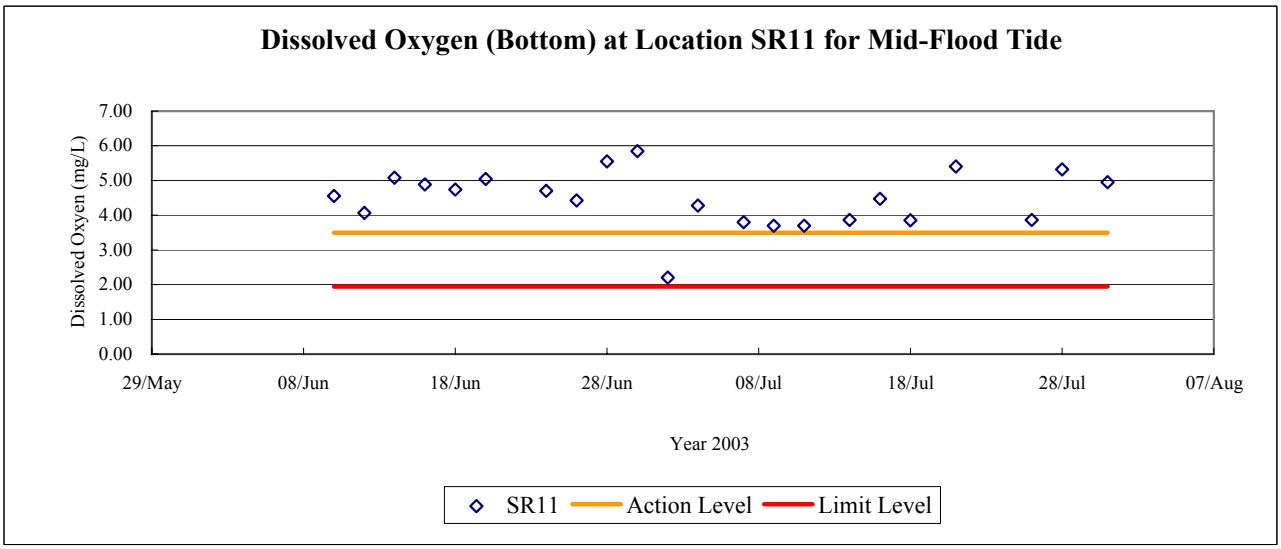

Dissolved Oxygen (Bottom) at Location SR7 for Mid-Flood Tide
Dissolved Oxyen (mg/L)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

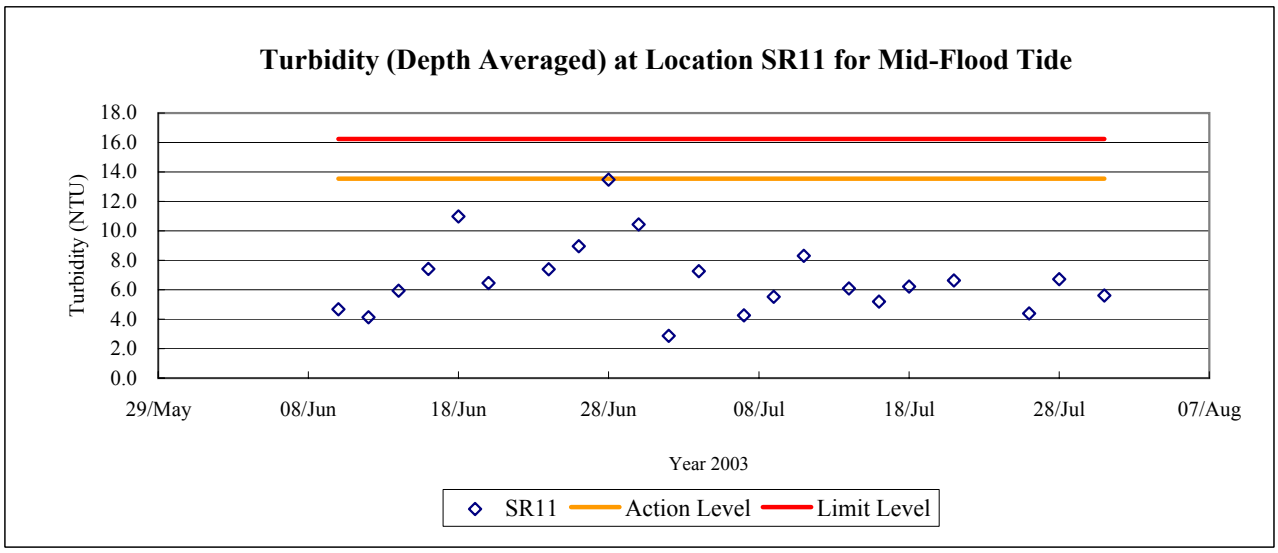

Turbidity (Depth Averaged) at Location SR7 for Mid-Flood Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

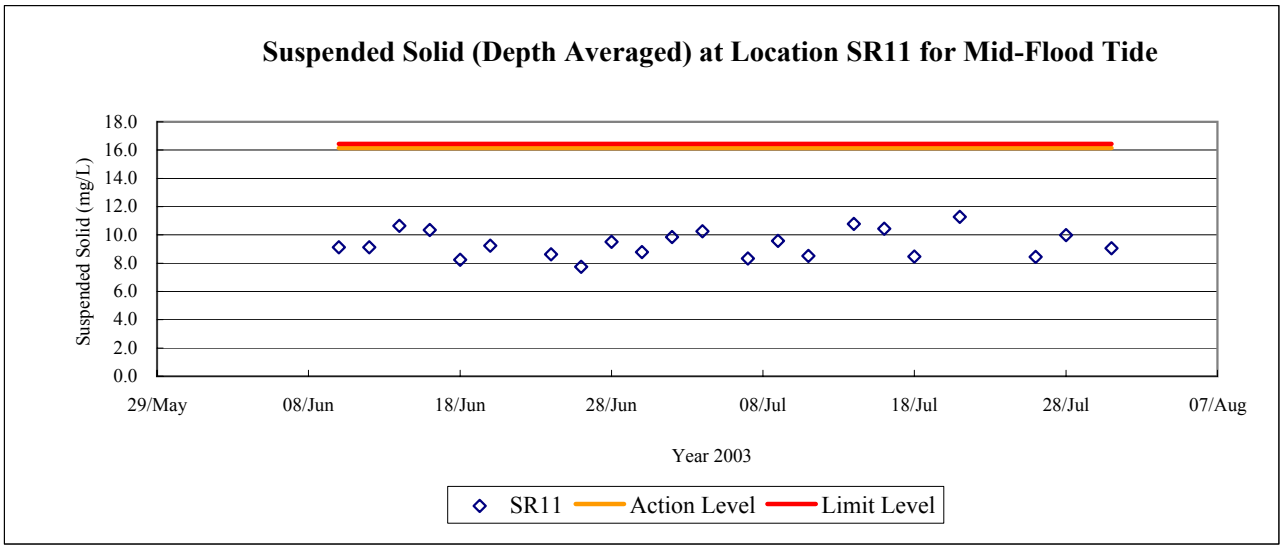

Suspended Solid (Depth Averaged) at Location SR7 for Mid-Flood Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

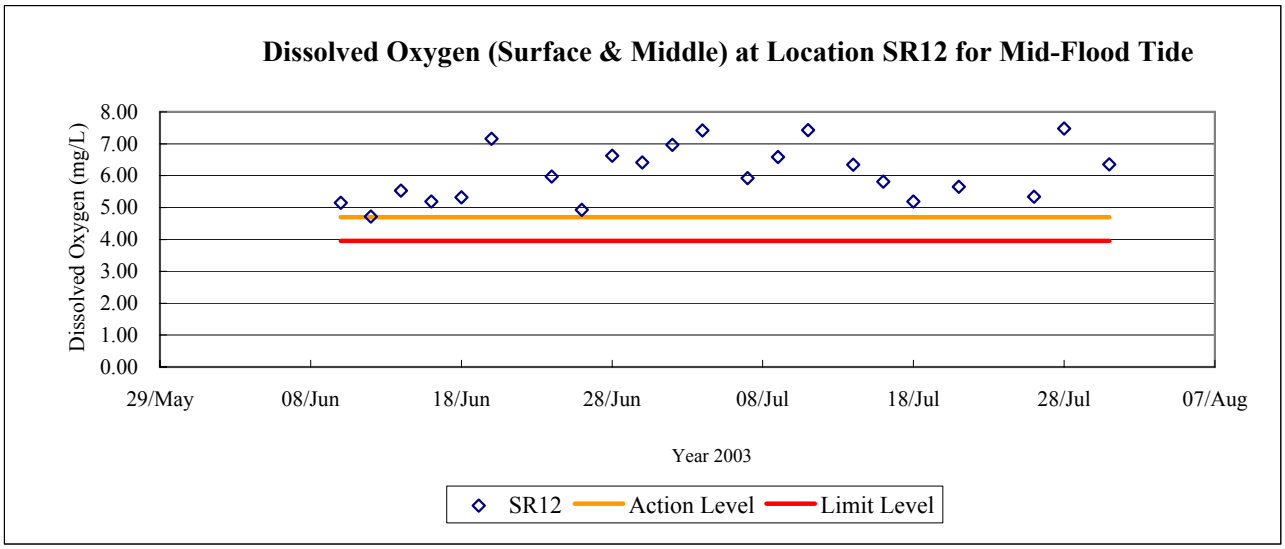

Suspended Solid (Depth Averaged) at Location SR10 for Mid-Flood Tide
Suspended Solid (mg/L)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR10
Limit Level

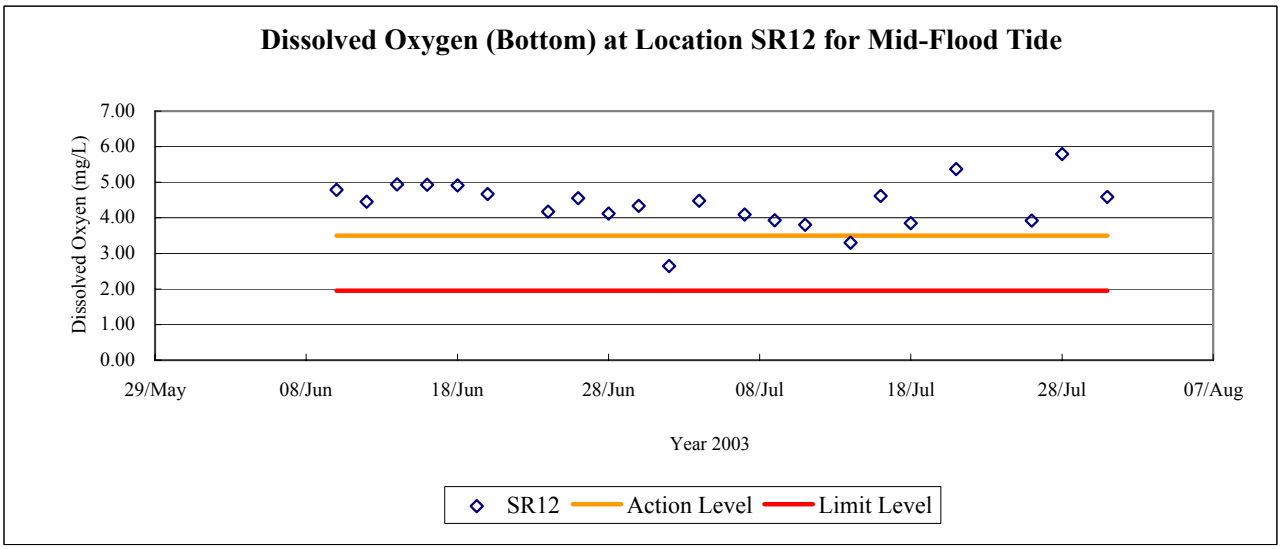

Dissolved Oxygen (Surface & Middle) at Location SR11 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
10.00
8.00
6.00
4.00
2.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

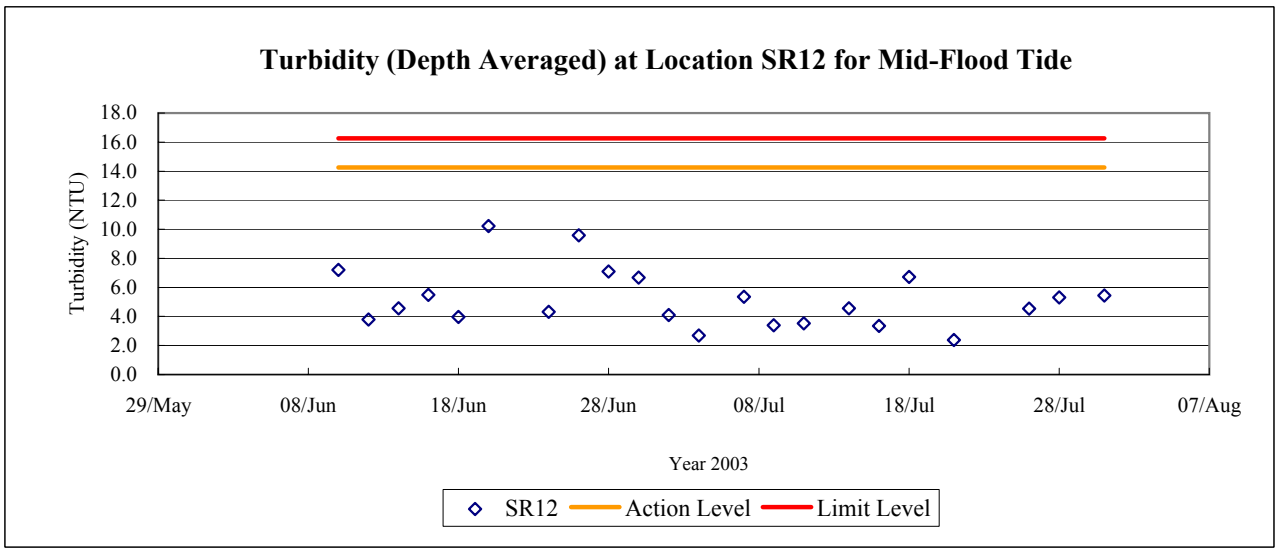

Dissolved Oxygen (Bottom) at Location SR11 for Mid-Flood Tide
Dissolved Oxyen (mg/L)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

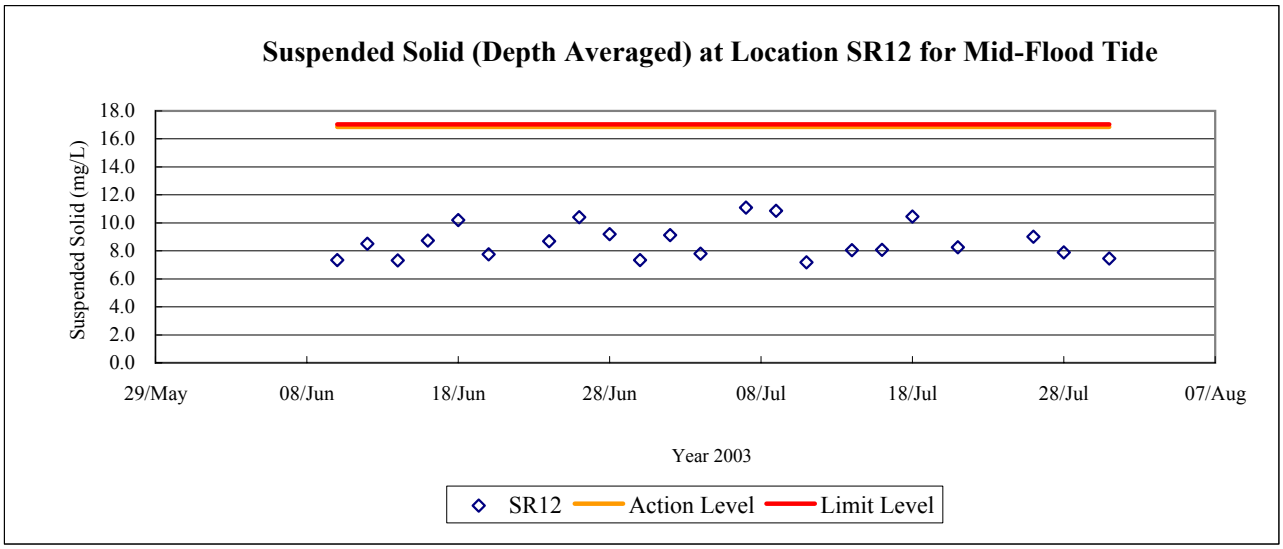

Turbidity (Depth Averaged) at Location SR11 for Mid-Flood Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

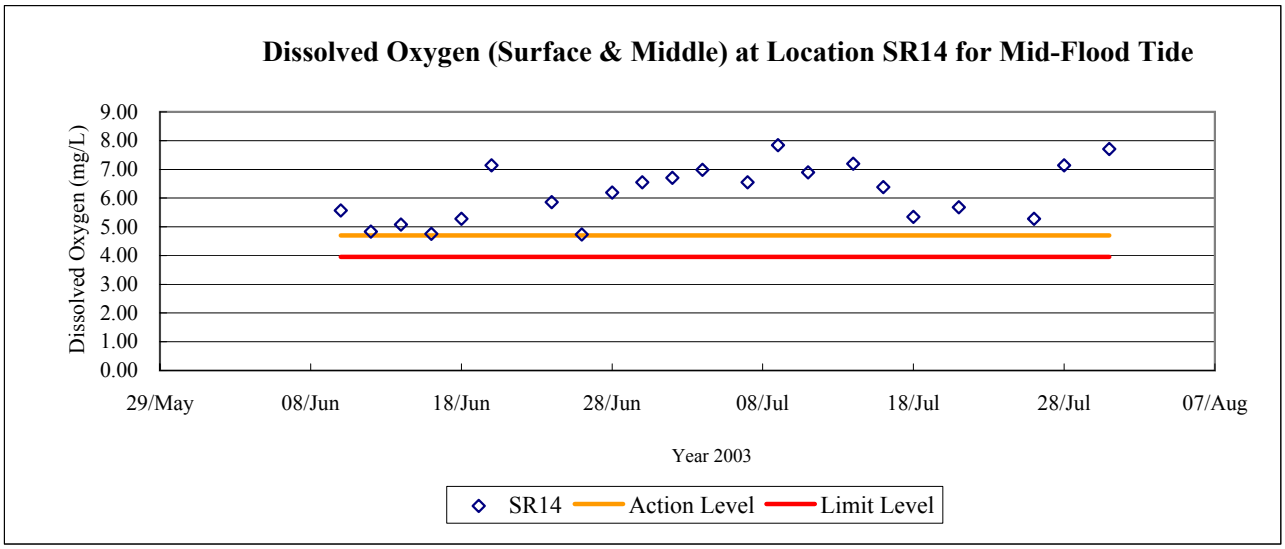

Suspended Solid (Depth Averaged) at Location SR11 for Mid-Flood Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

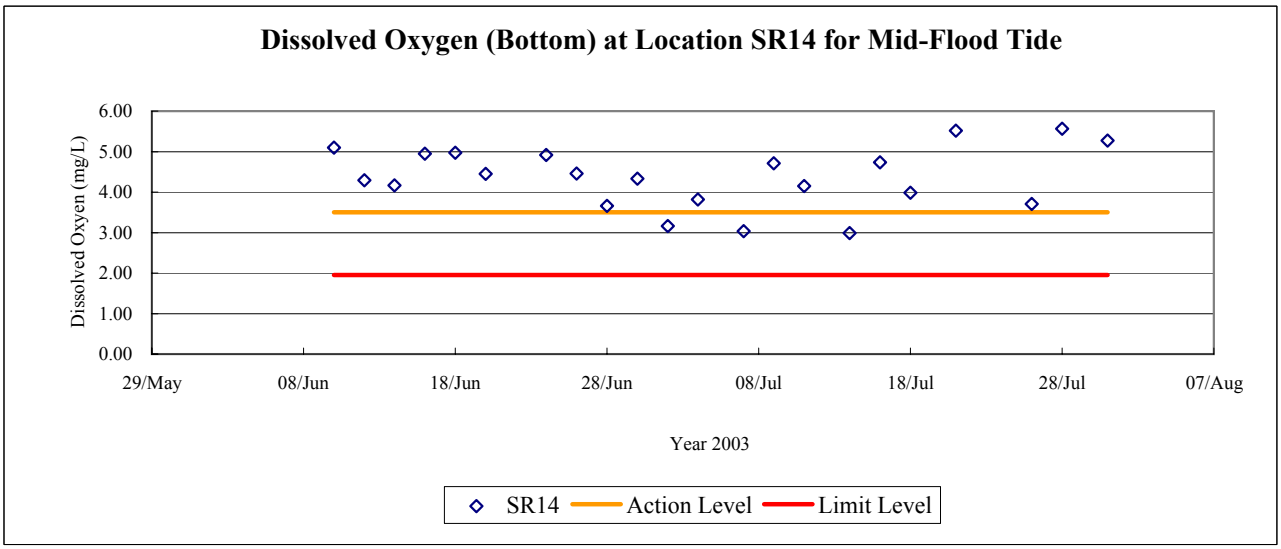

Dissolved Oxygen (Surface & Middle) at Location SR12 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

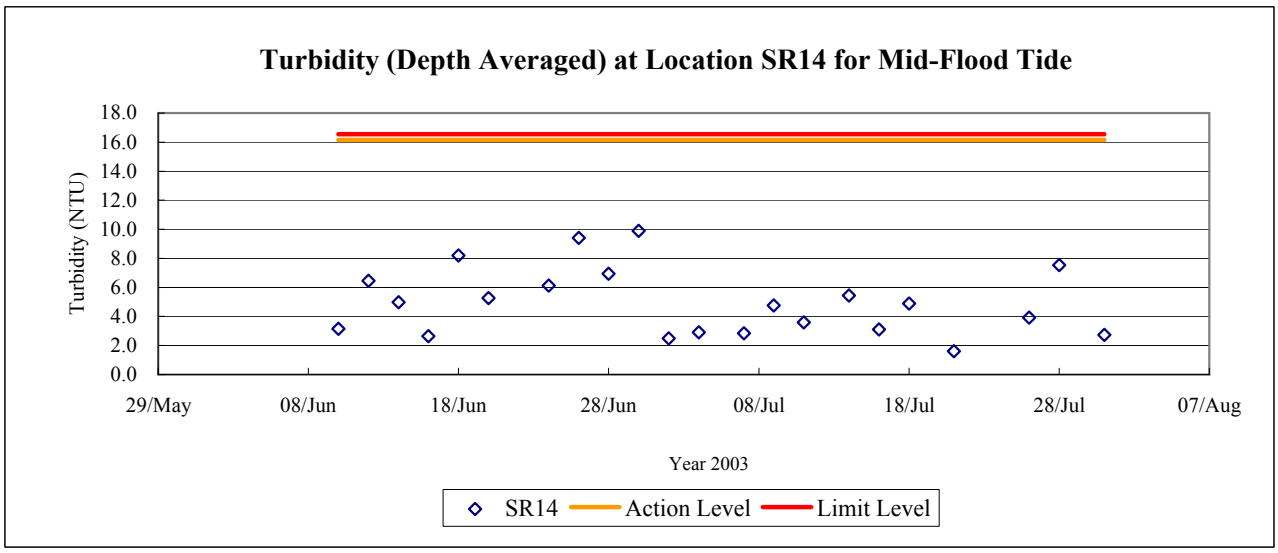

Dissolved Oxygen (Bottom) at Location SR12 for Mid-Flood Tide
Dissolved Oxyen (mg/L)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

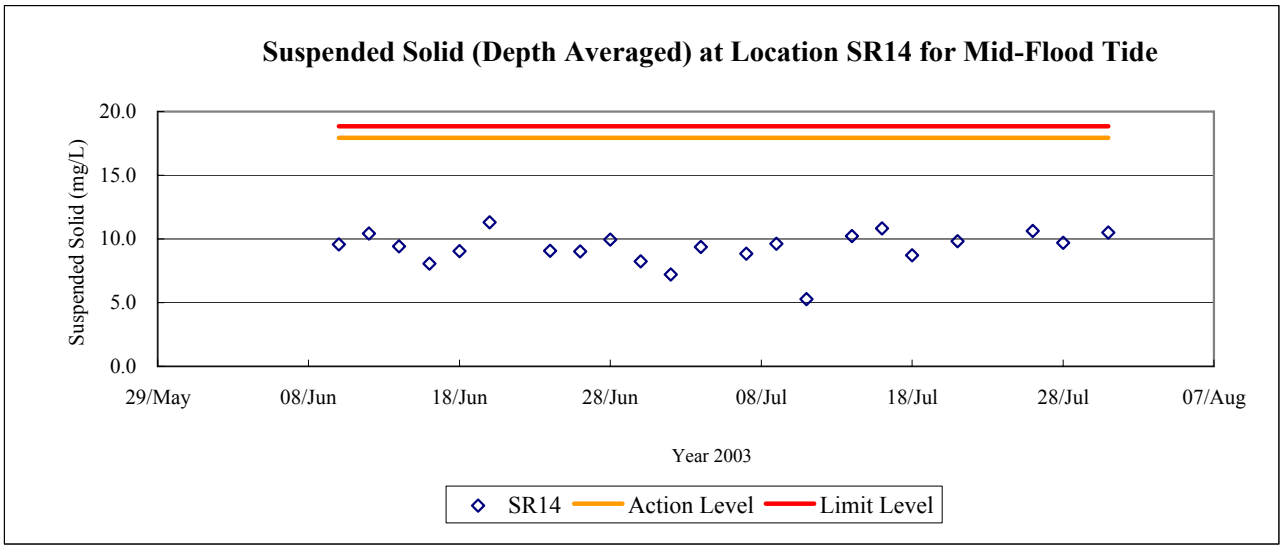

Turbidity (Depth Averaged) at Location SR12 for Mid-Flood Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

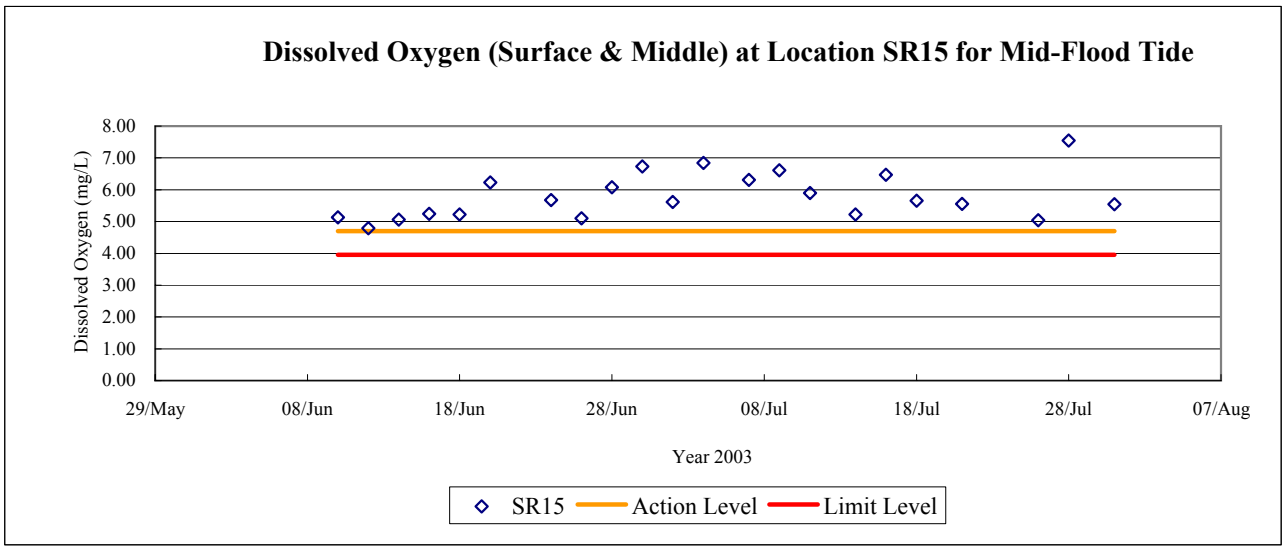

Suspended Solid (Depth Averaged) at Location SR12 for Mid-Flood Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

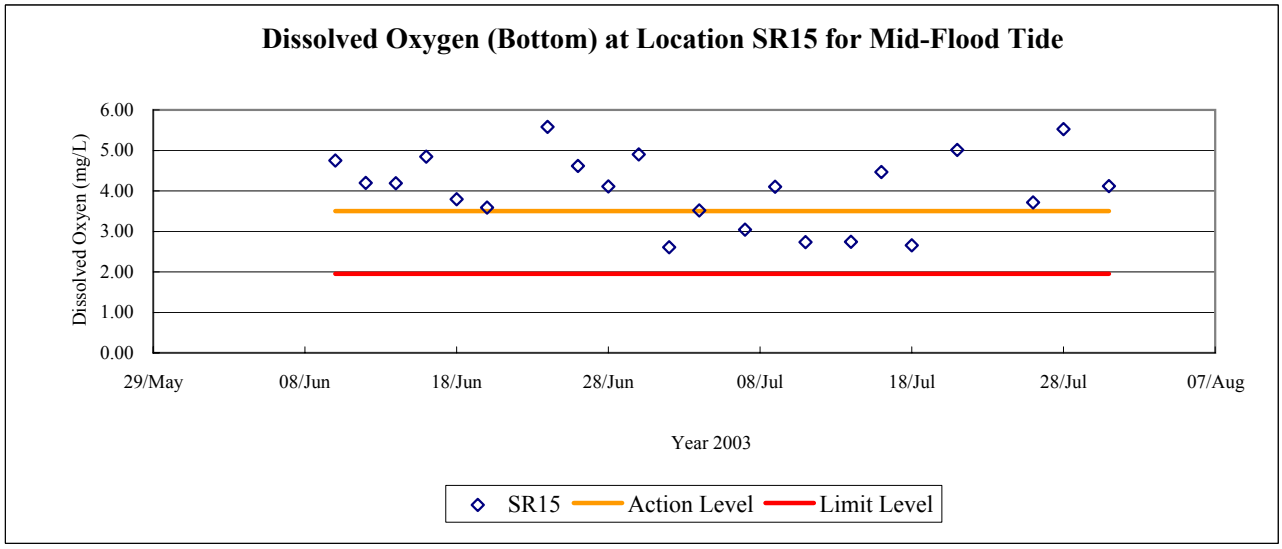

Dissolved Oxygen (Surface & Middle) at Location SR14 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level

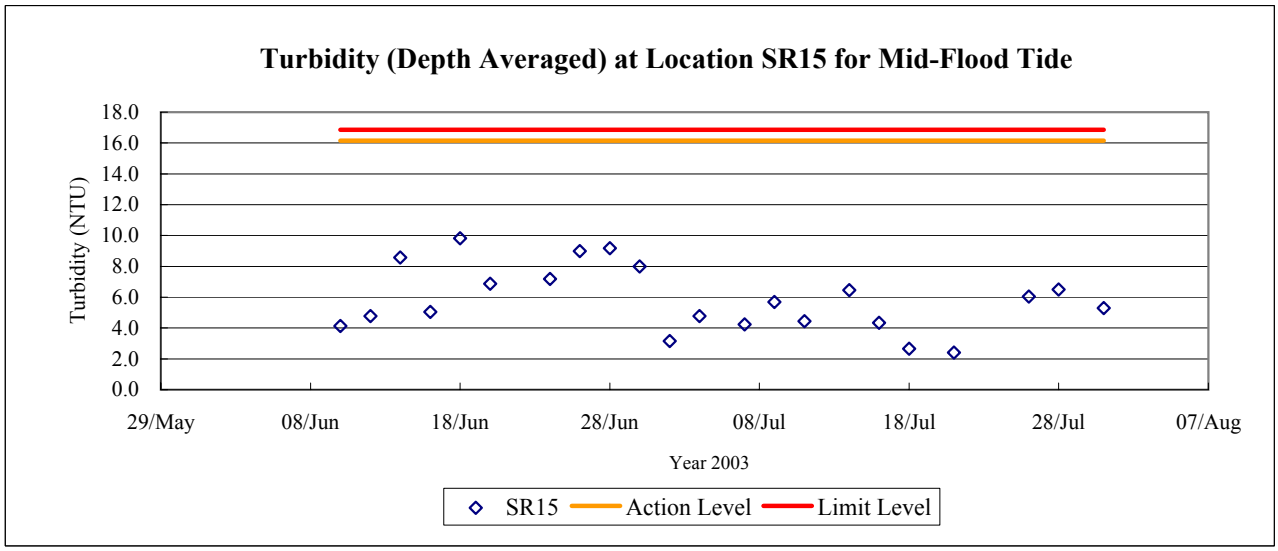

Dissolved Oxygen (Bottom) at Location SR14 for Mid-Flood Tide
Dissolved Oxyen (mg/L)
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level

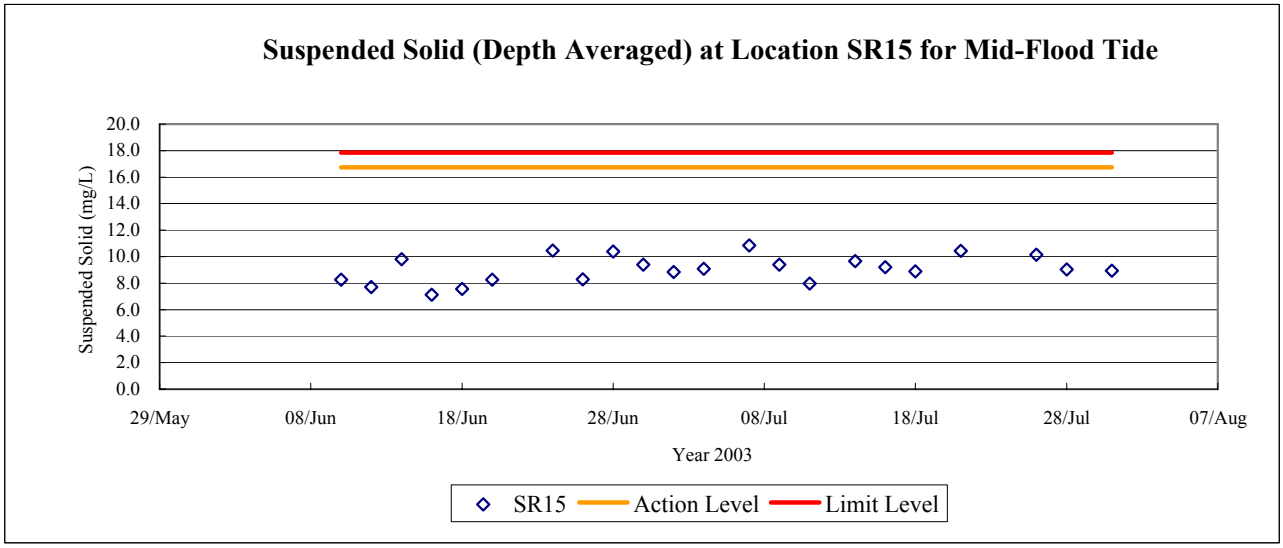

Turbidity (Depth Averaged) at Location SR14 for Mid-Flood Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level

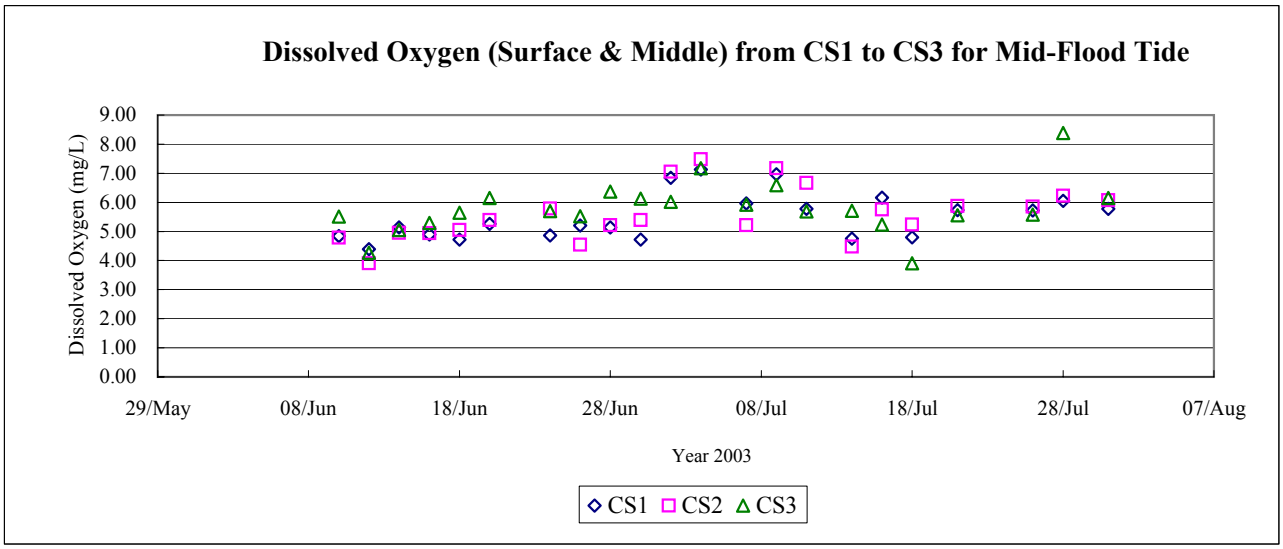

Suspended Solid (Depth Averaged) at Location SR14 for Mid-Flood Tide
Suspended Solid (mg/L)
20.0
15.0
10.0
5.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level

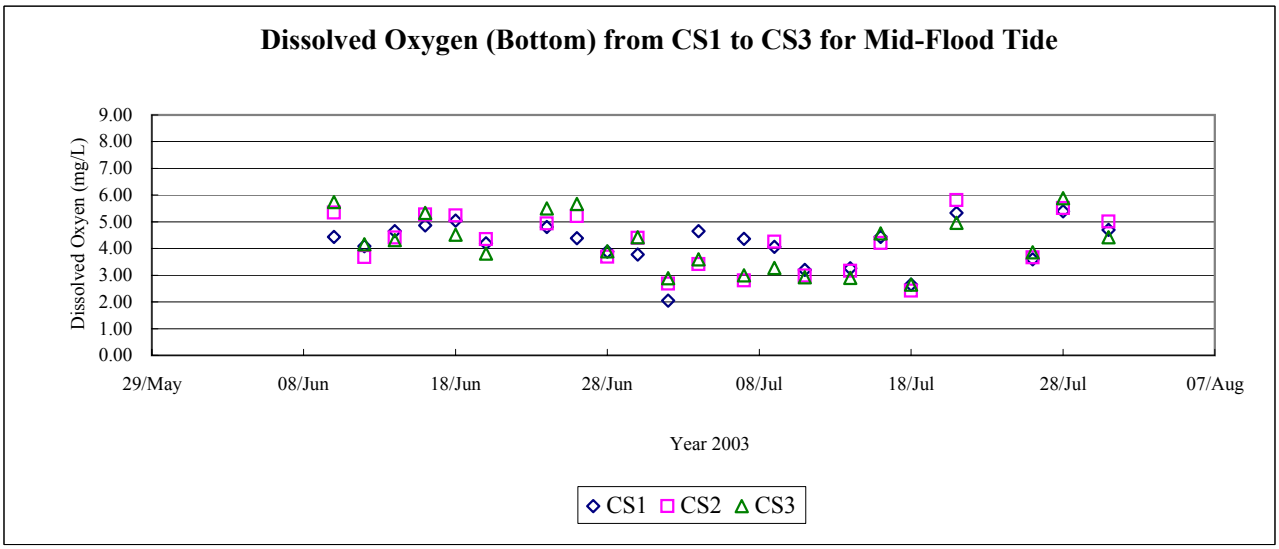

Dissolved Oxygen (Surface & Middle) at Location SR15 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level

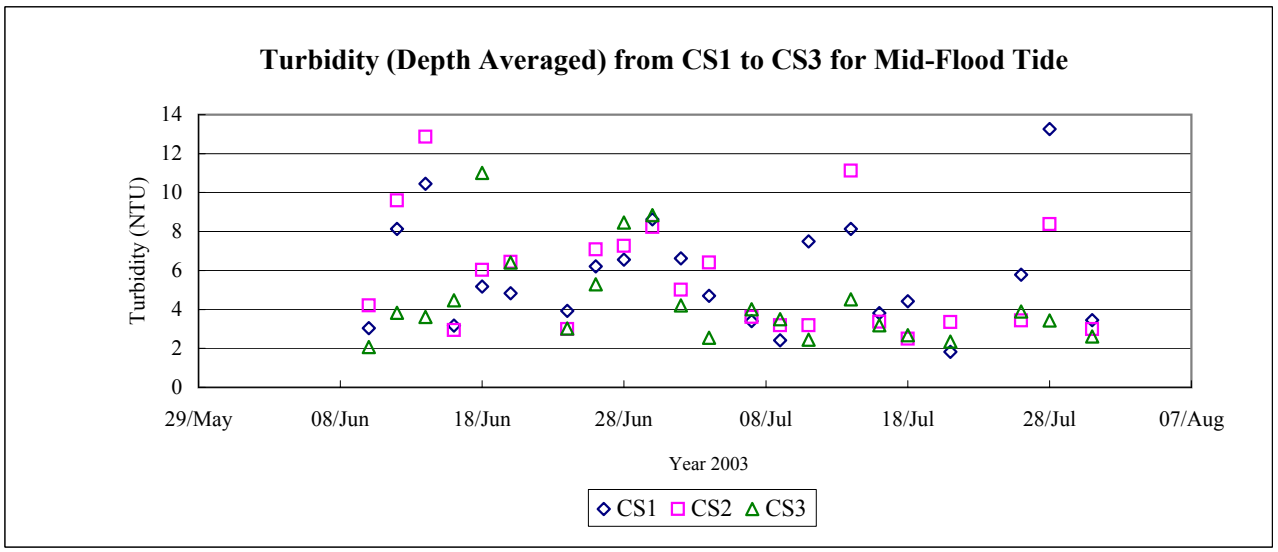

Dissolved Oxygen (Bottom) at Location SR15 for Mid-Flood Tide
Dissolved Oxyen (mg/L)
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level

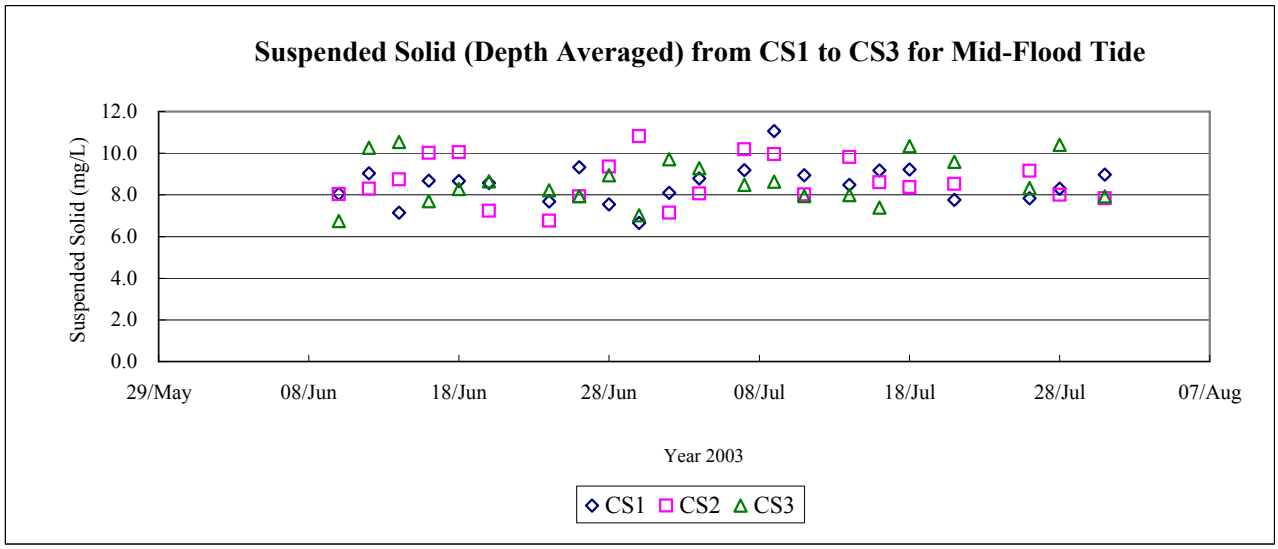

Turbidity (Depth Averaged) at Location SR15 for Mid-Flood Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level

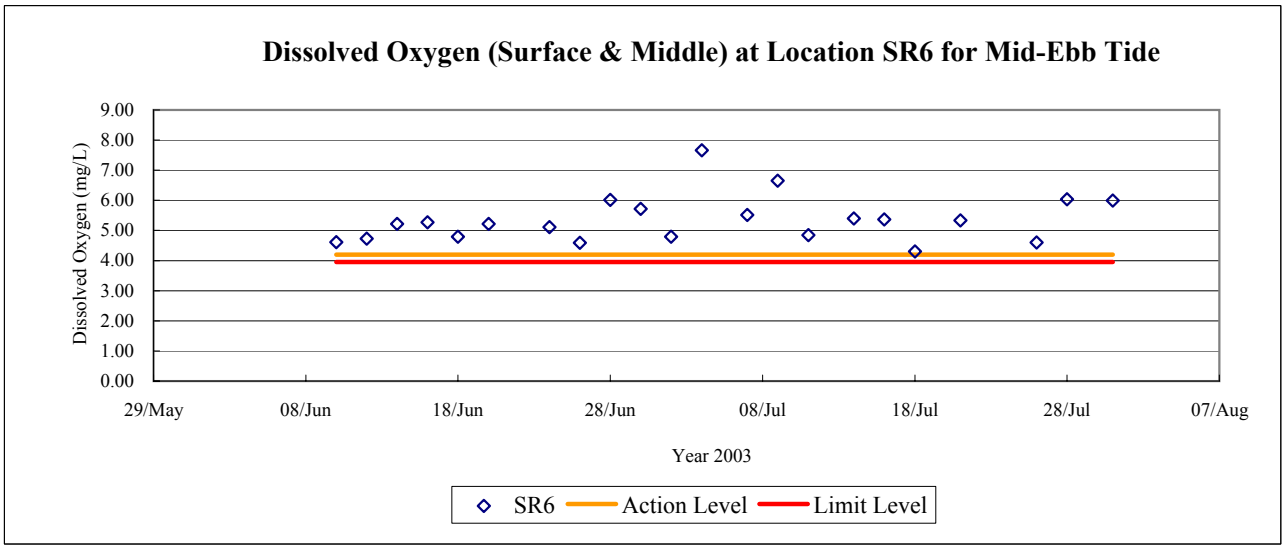

Suspended Solid (Depth Averaged) at Location SR15 for Mid-Flood Tide
Suspended Solid (mg/L)
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level

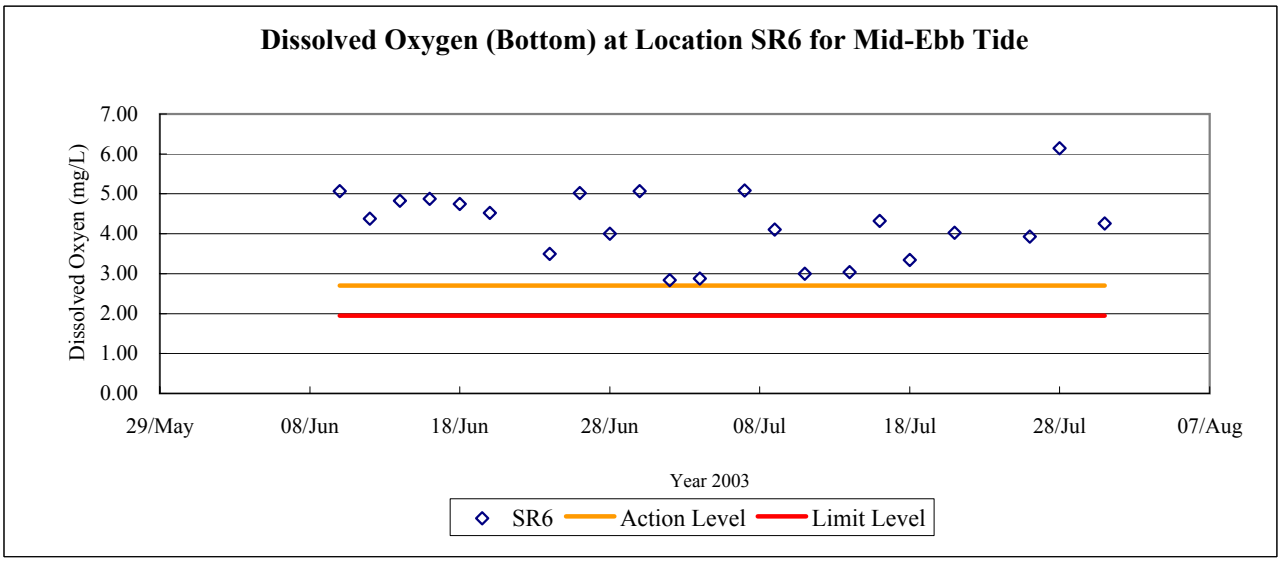

Dissolved Oxygen (Surface & Middle) from CS1 to CS3 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
CS1 CS2 CS3

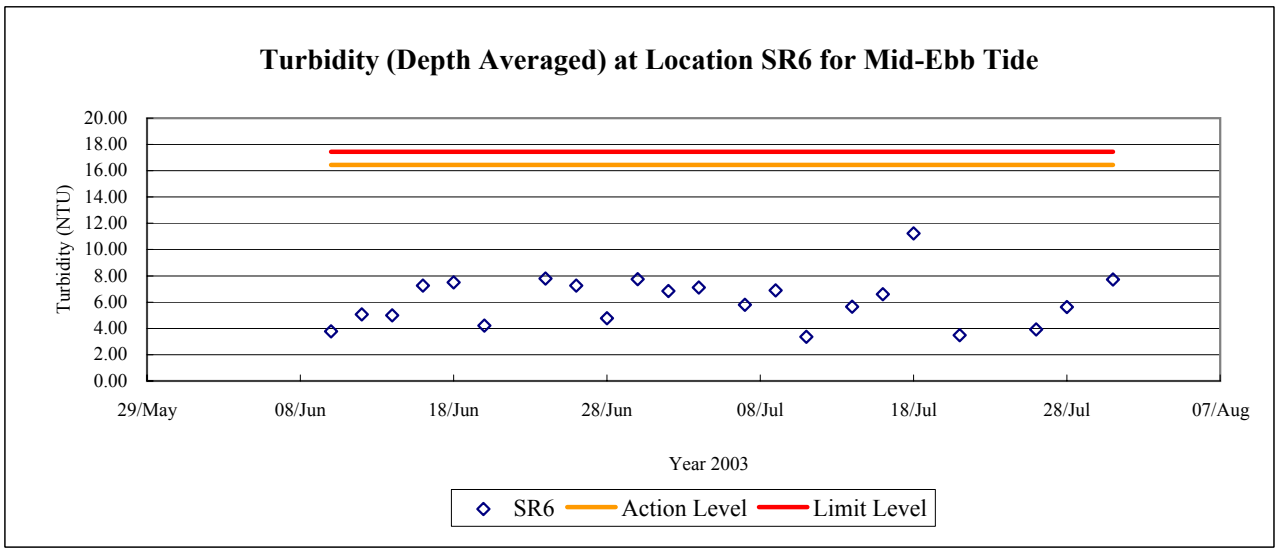

Dissolved Oxygen (Bottom) from CS1 to CS3 for Mid-Flood Tide
Dissolved Oxygen (mg/L)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
CS1 CS2 CS3

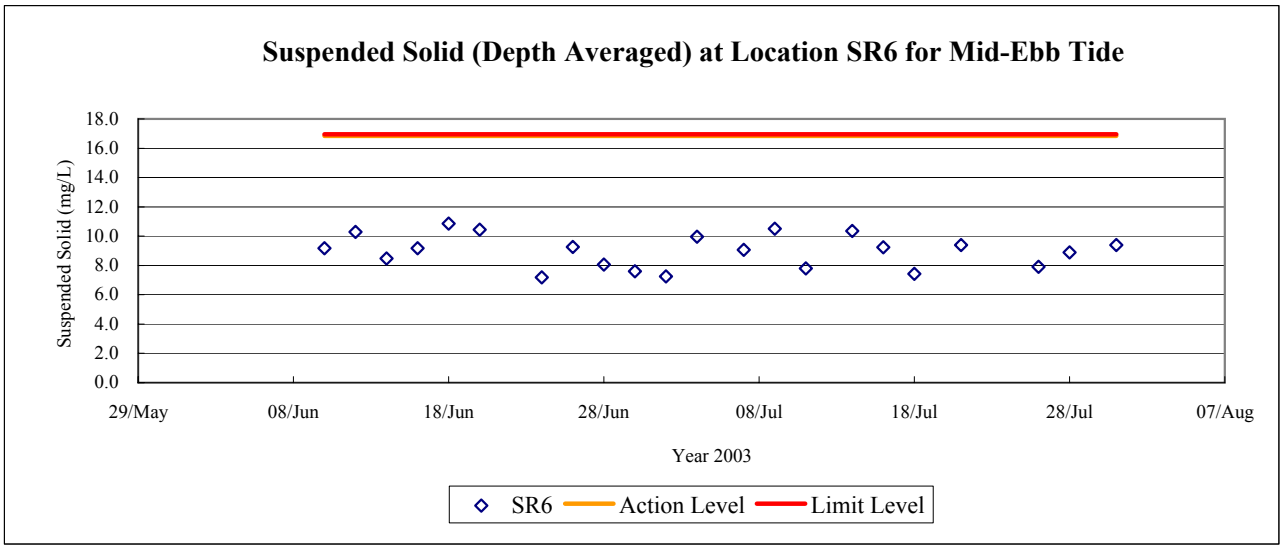

Turbidity (Depth Averaged) from CS1 to CS3 for Mid-Flood Tide
Turbidity (NTU)
14
12
10
8
6
4
2
0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
CS1 CS2 CS3

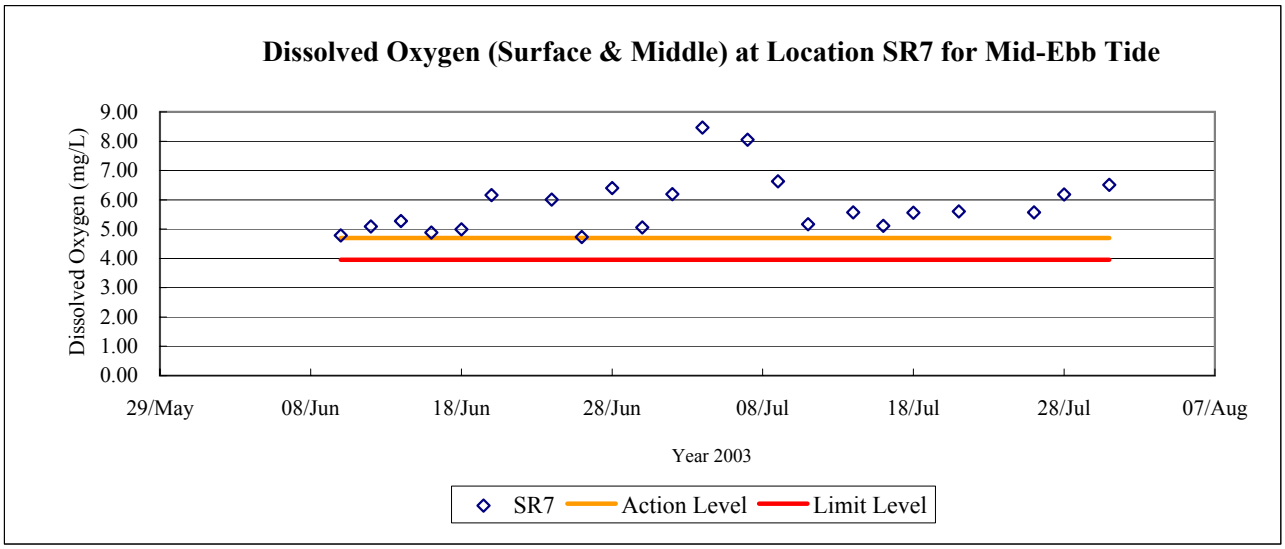

Suspended Solid (Depth Averaged) from CS1 to CS3 for Mid-Flood Tide
Suspended Solid (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
CS1
CS2
CS3

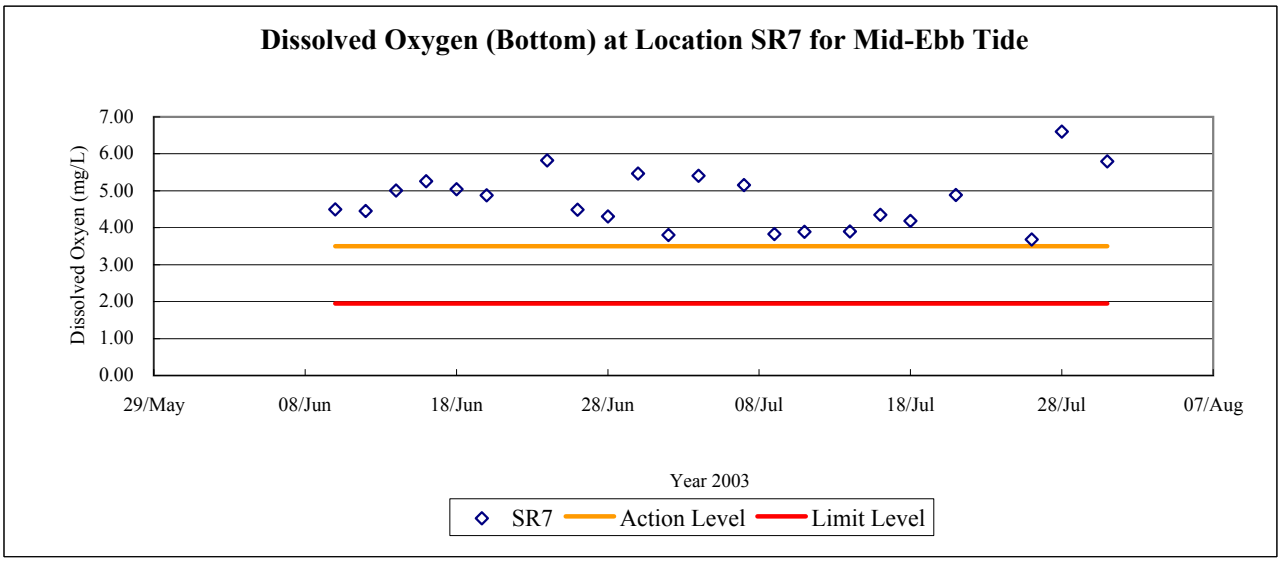

Dissolved Oxygen (Surface & Middle) at Location SR6 for Mid-Ebb Tide
Dissolved Oxygen (mg/L)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

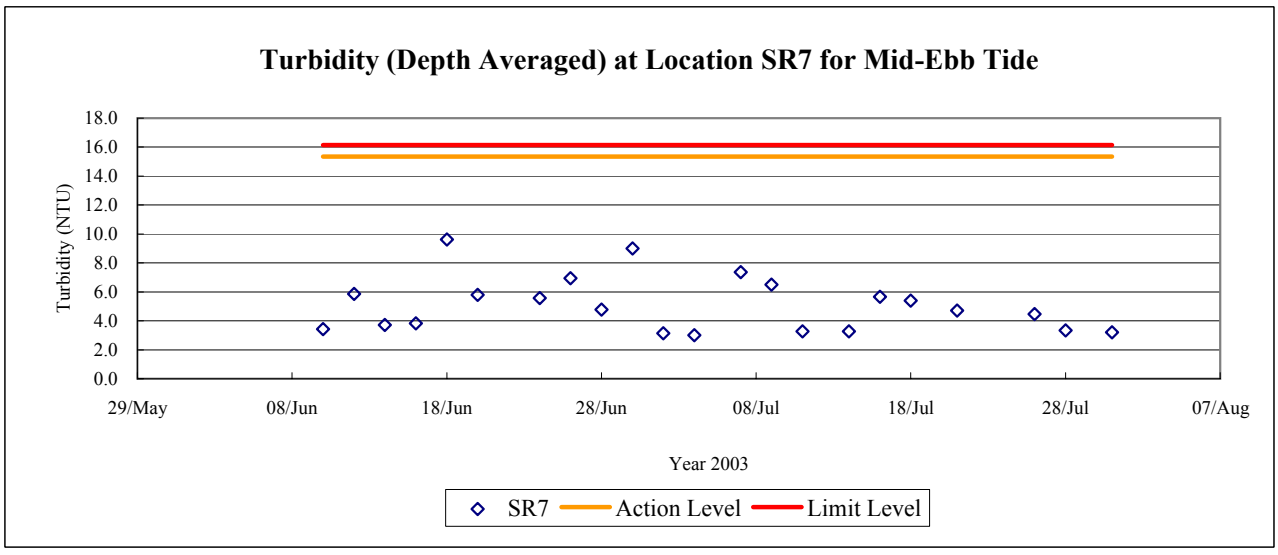

Dissolved Oxygen (Bottom) at Location SR6 for Mid-Ebb Tide
Dissolved Oxyen (mg/L)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

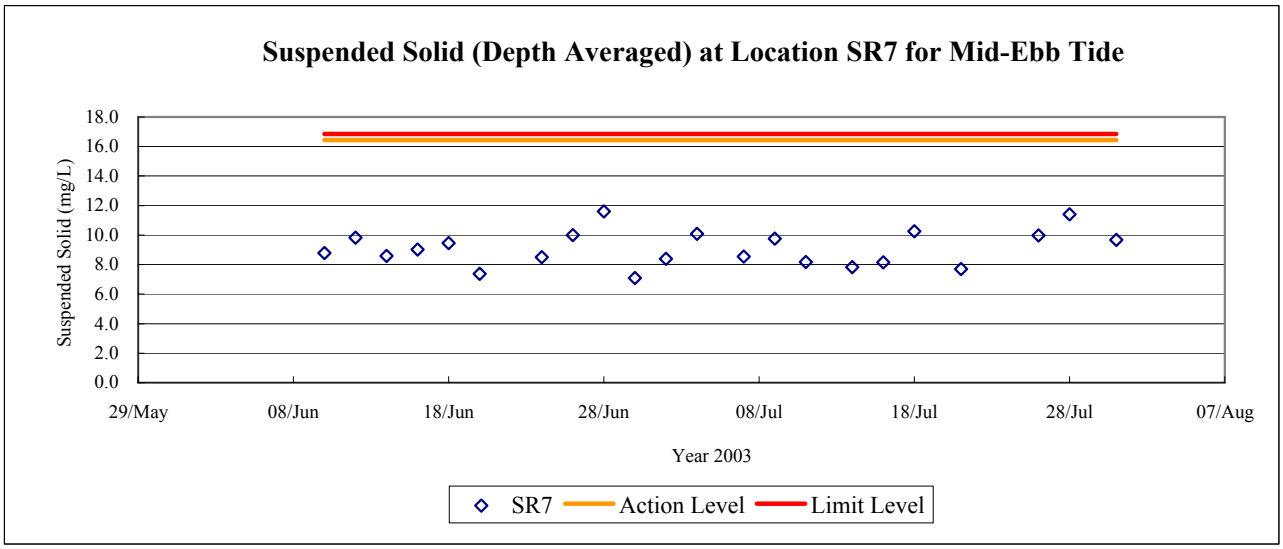

Turbidity (Depth Averaged) at Location SR6 for Mid-Ebb Tide
Turbidity (NTU)
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

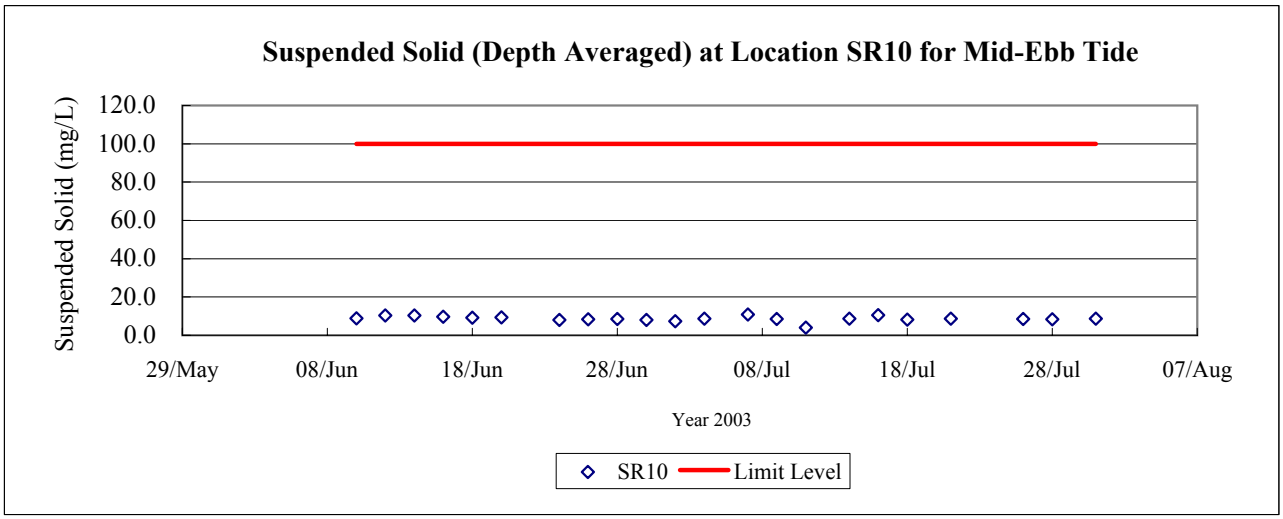

Suspended Solid (Depth Averaged) at Location SR6 for Mid-Ebb Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR6
Action Level
Limit Level

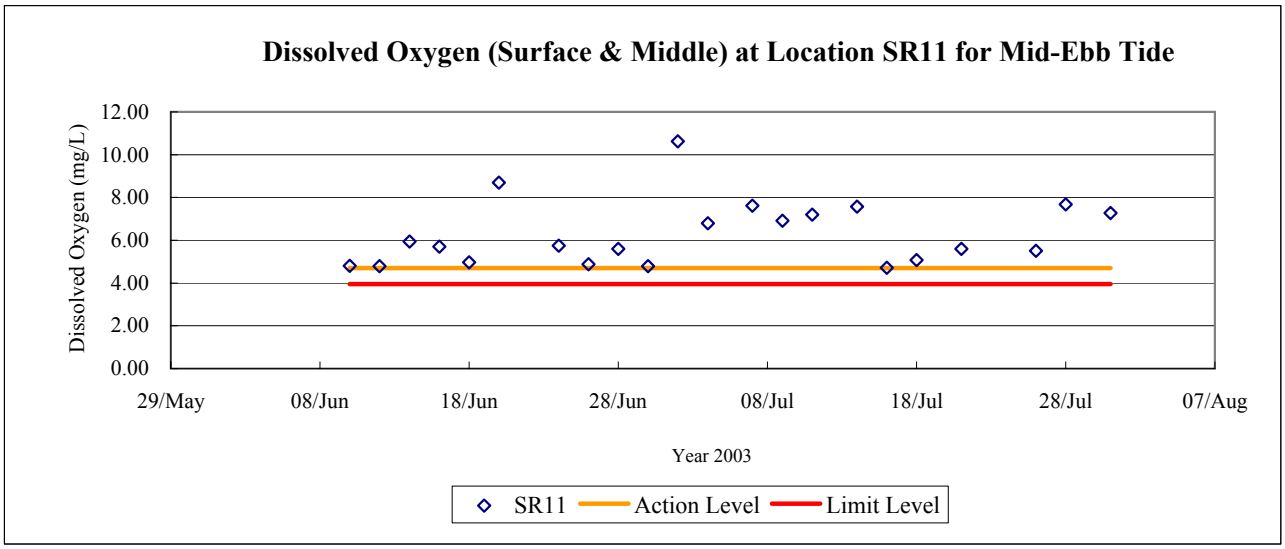

Dissolved Oxygen (Surface & Middle) at Location SR7 for Mid-Ebb Tide
Dissolved Oxygen (mg/L)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

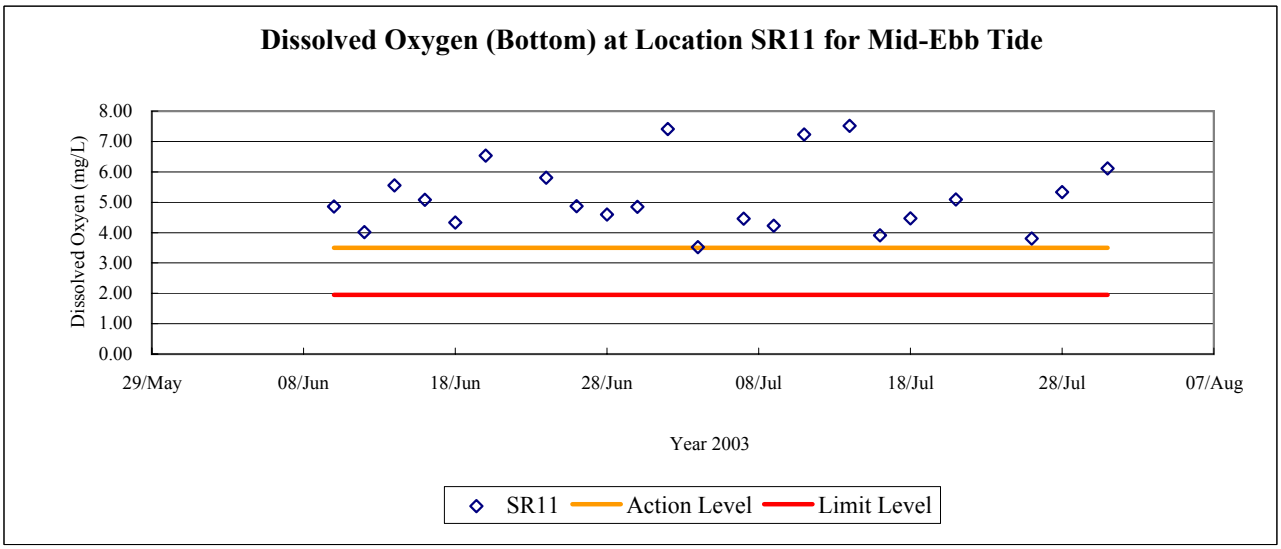

Dissolved Oxygen (Bottom) at Location SR7 for Mid-Ebb Tide
Dissolved Oxyen (mg/L)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

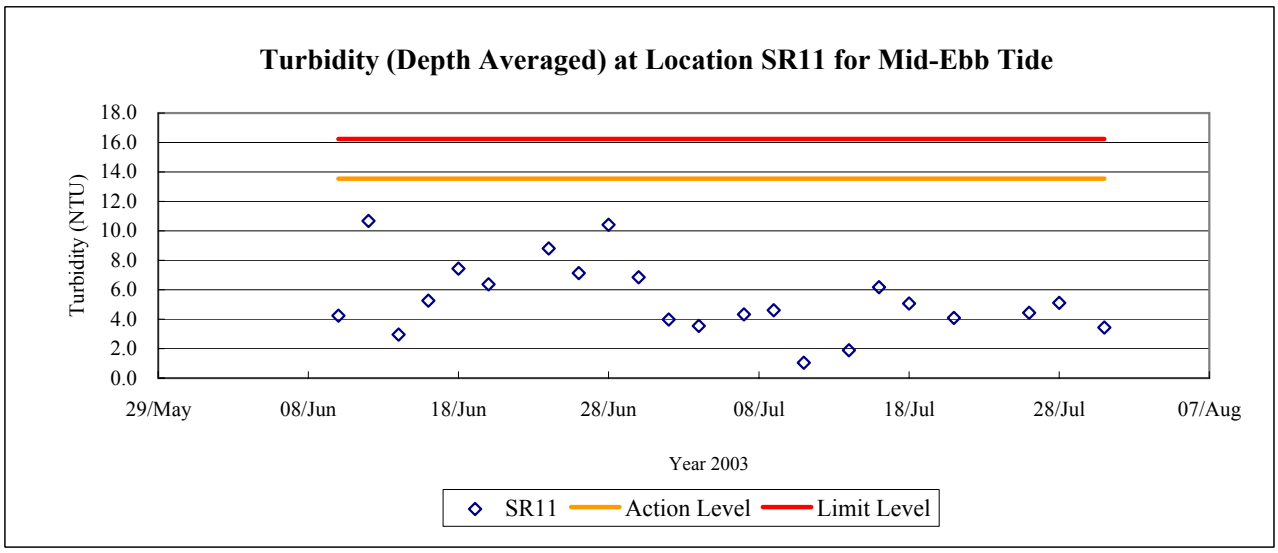

Turbidity (Depth Averaged) at Location SR7 for Mid-Ebb Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

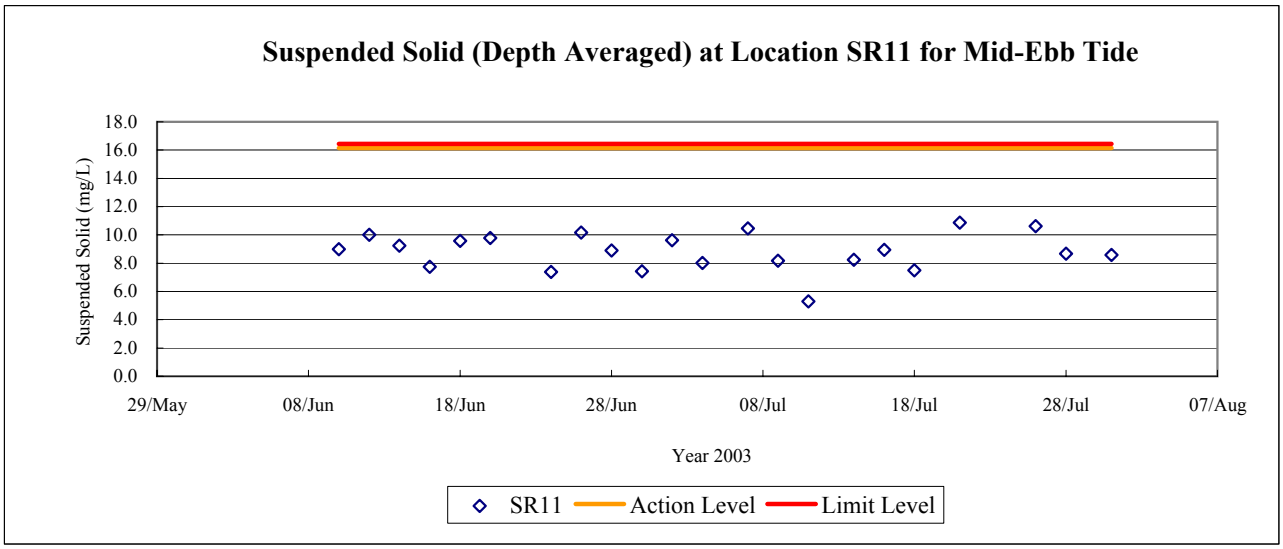

Suspended Solid (Depth Averaged) at Location SR7 for Mid-Ebb Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR7
Action Level
Limit Level

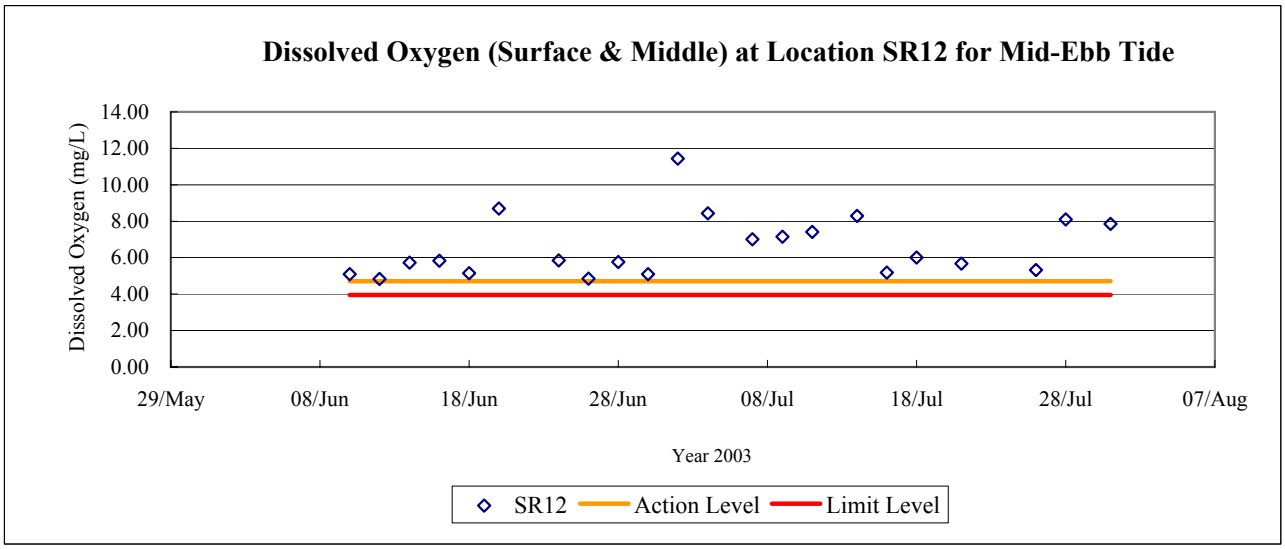

Suspended Solid (Depth Averaged) at Location SR10 for Mid-Ebb Tide
Suspended Solid (mg/L)
120.0
100.0
80.0
60.0
40.0
20.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR10
Limit Level

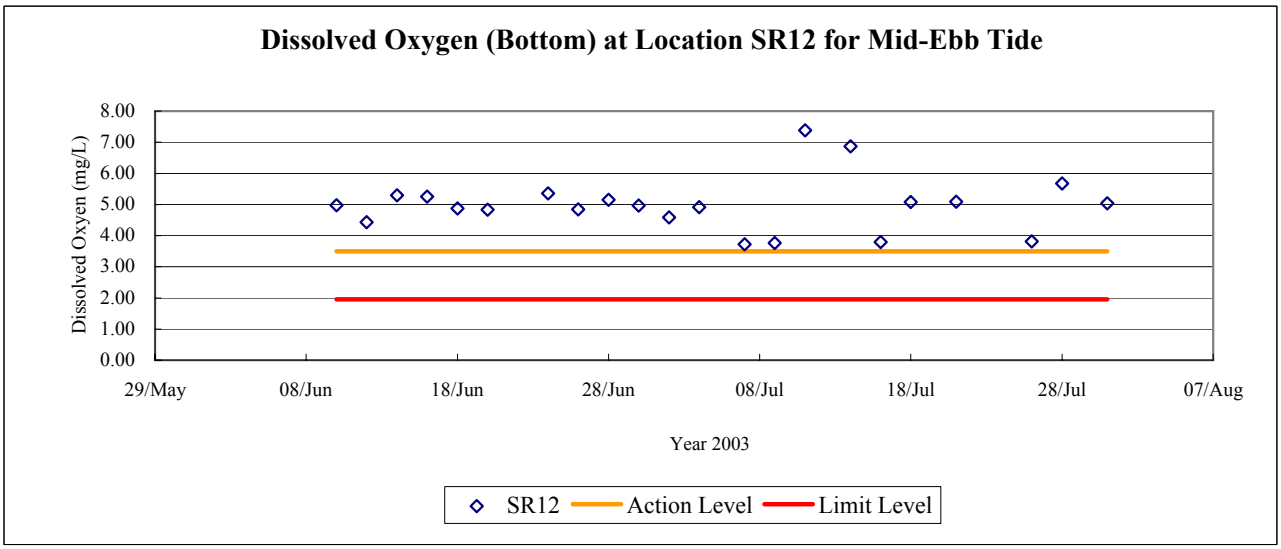

Dissolved Oxygen (Surface & Middle) at Location SR11 for Mid-Ebb Tide
Dissolved Oxygen (mg/L)
12.00
10.00
8.00
6.00
4.00
2.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

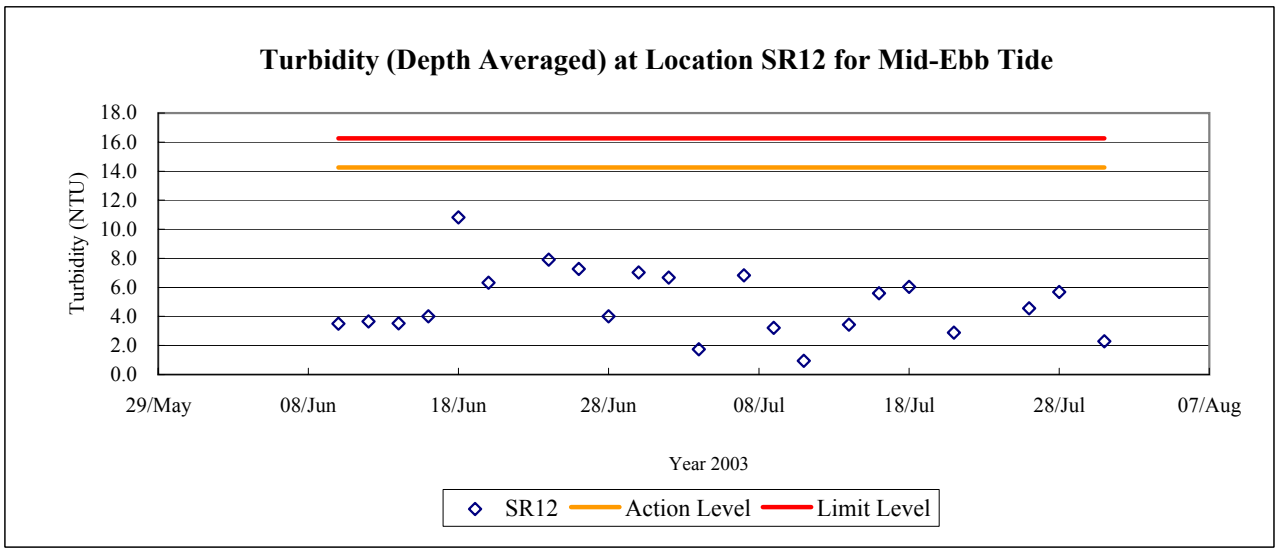

Dissolved Oxygen (Bottom) at Location SR11 for Mid-Ebb Tide
Dissolved Oxyen (mg/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

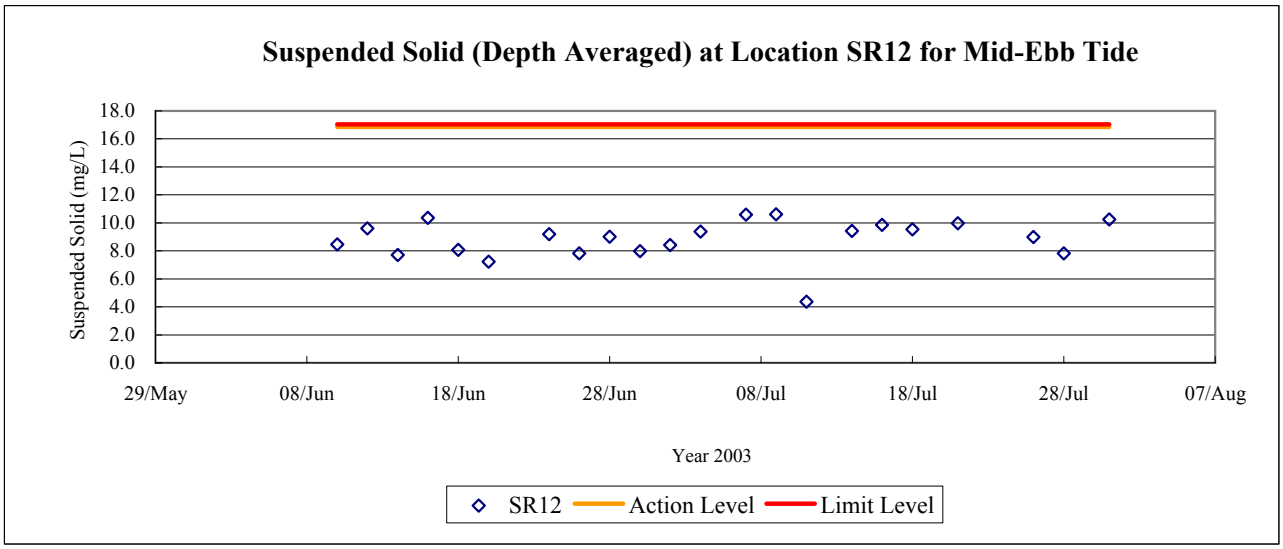

Turbidity (Depth Averaged) at Location SR11 for Mid-Ebb Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

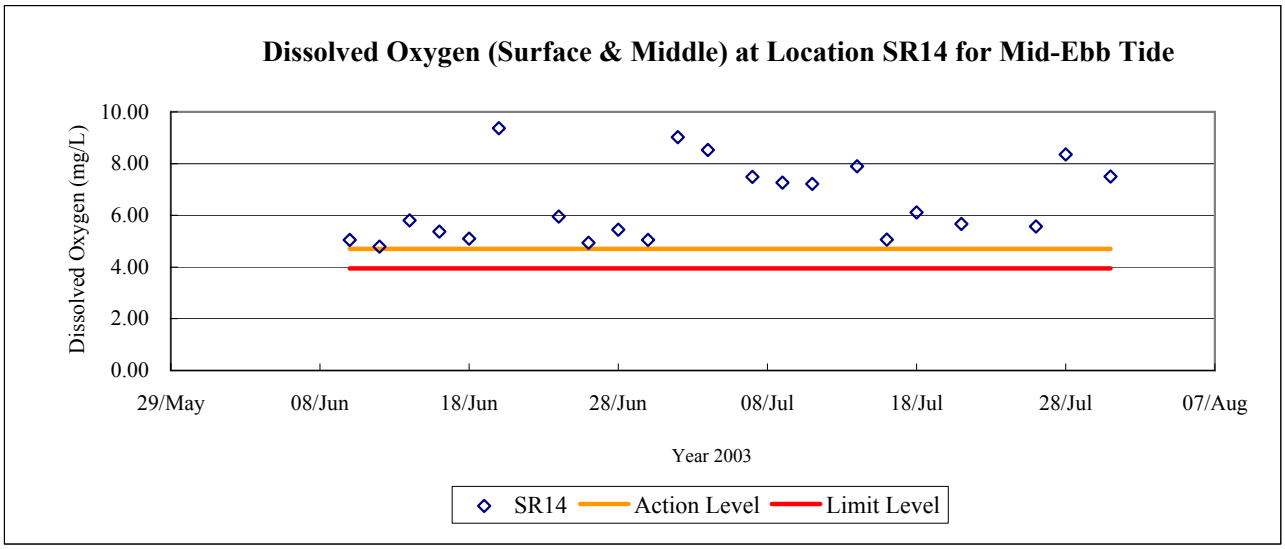

Suspended Solid (Depth Averaged) at Location SR11 for Mid-Ebb Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR11
Action Level
Limit Level

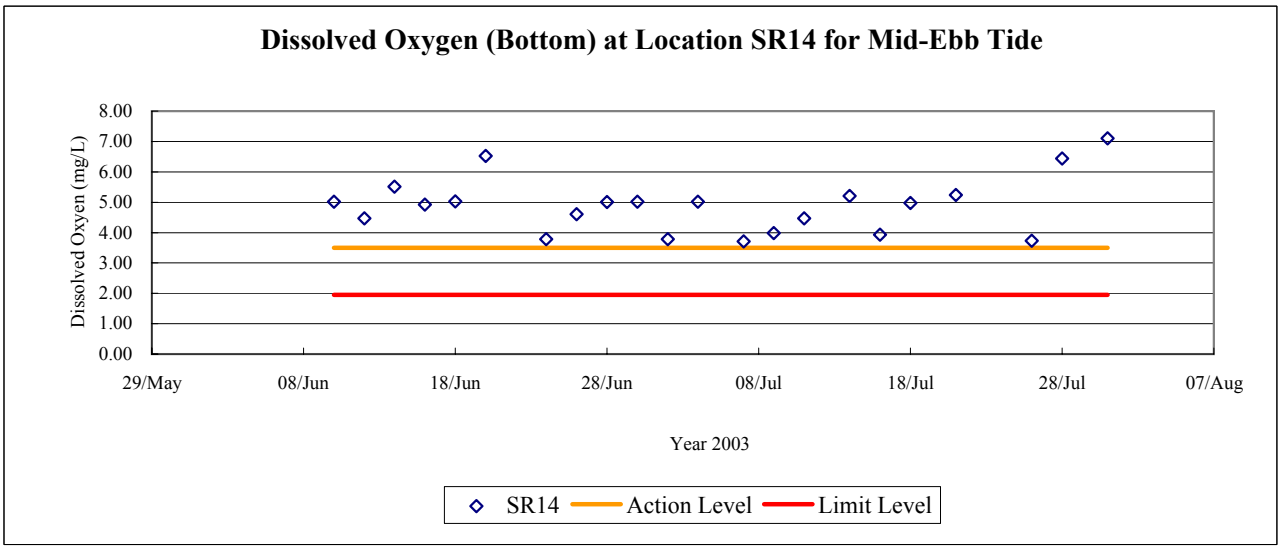

Dissolved Oxygen (Surface & Middle) at Location SR12 for Mid-Ebb Tide
Dissolved Oxygen (mg/L)
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

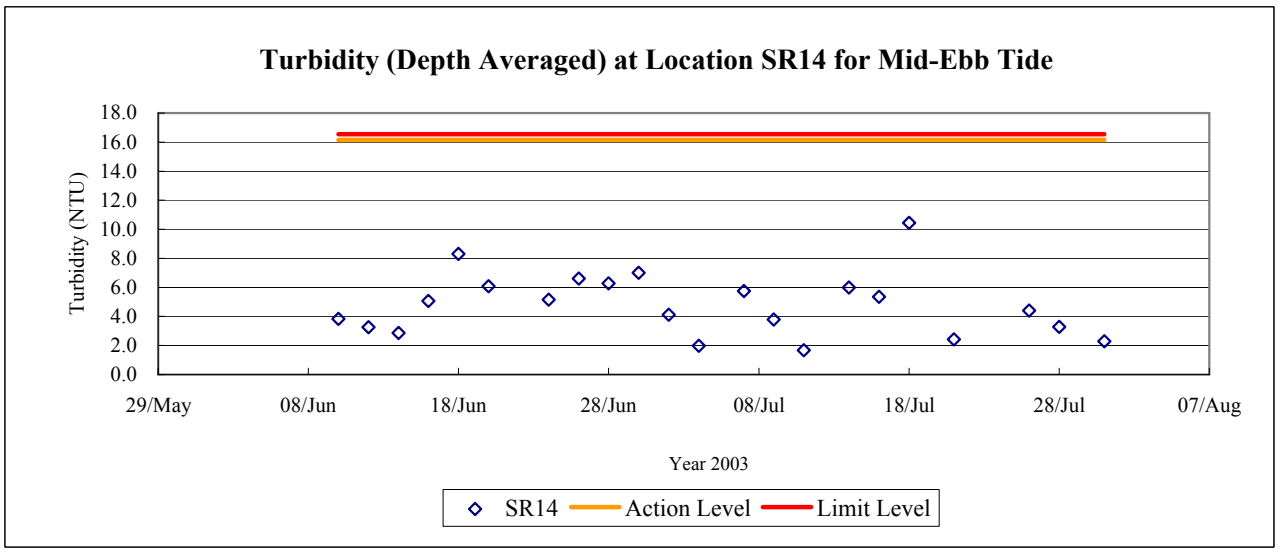

Dissolved Oxygen (Bottom) at Location SR12 for Mid-Ebb Tide
Dissolved Oxyen (mg/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

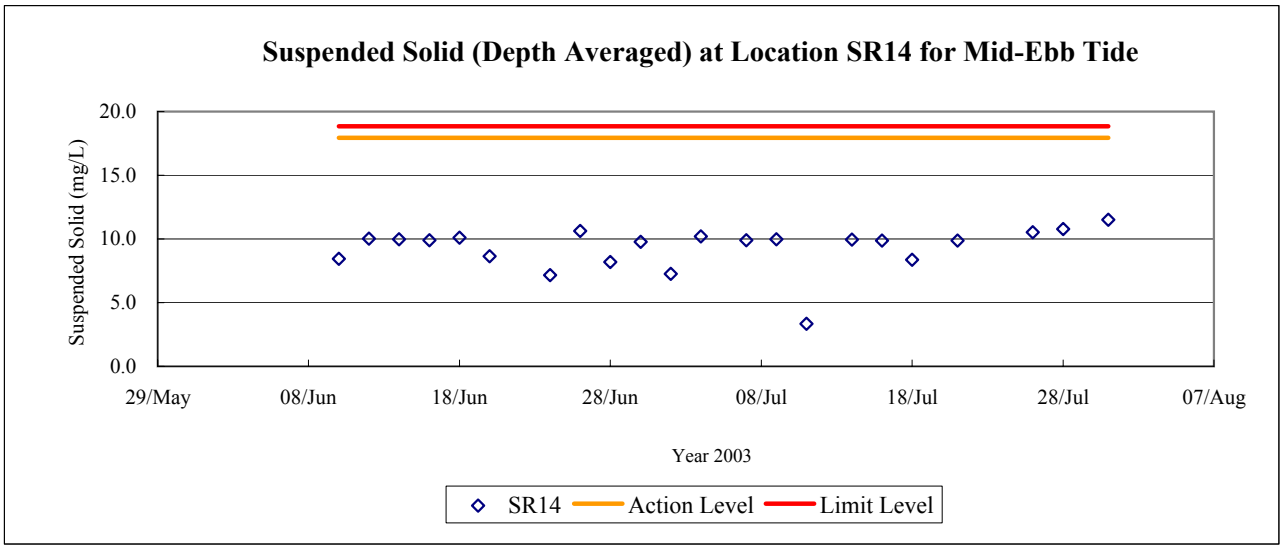

Turbidity (Depth Averaged) at Location SR12 for Mid-Ebb Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

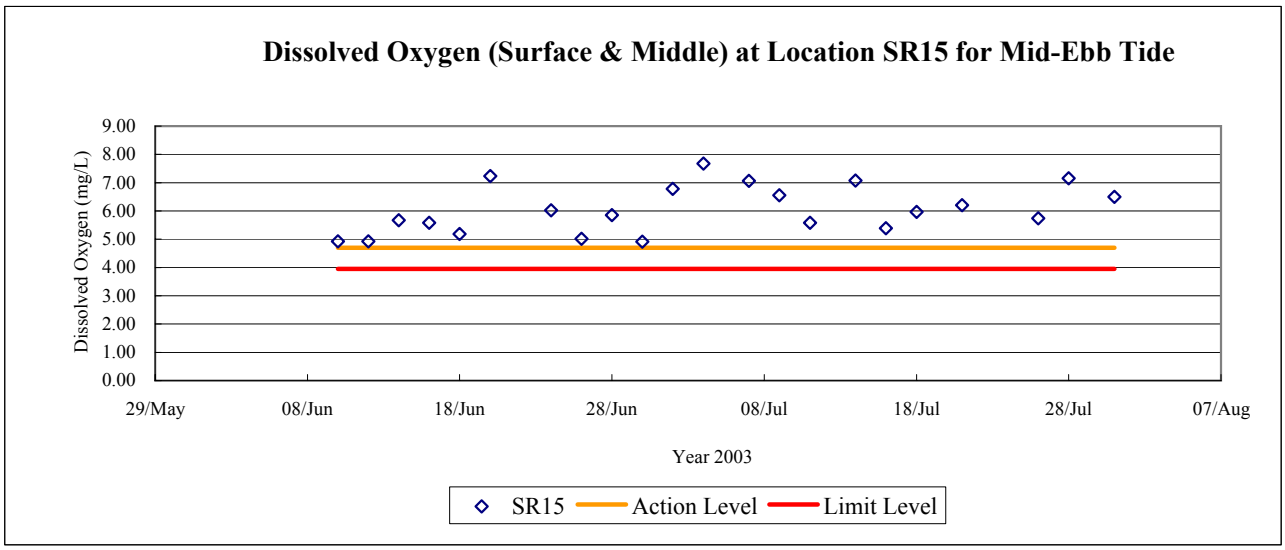

Suspended Solid (Depth Averaged) at Location SR12 for Mid-Ebb Tide
Suspended Solid (mg/L)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR12
Action Level
Limit Level

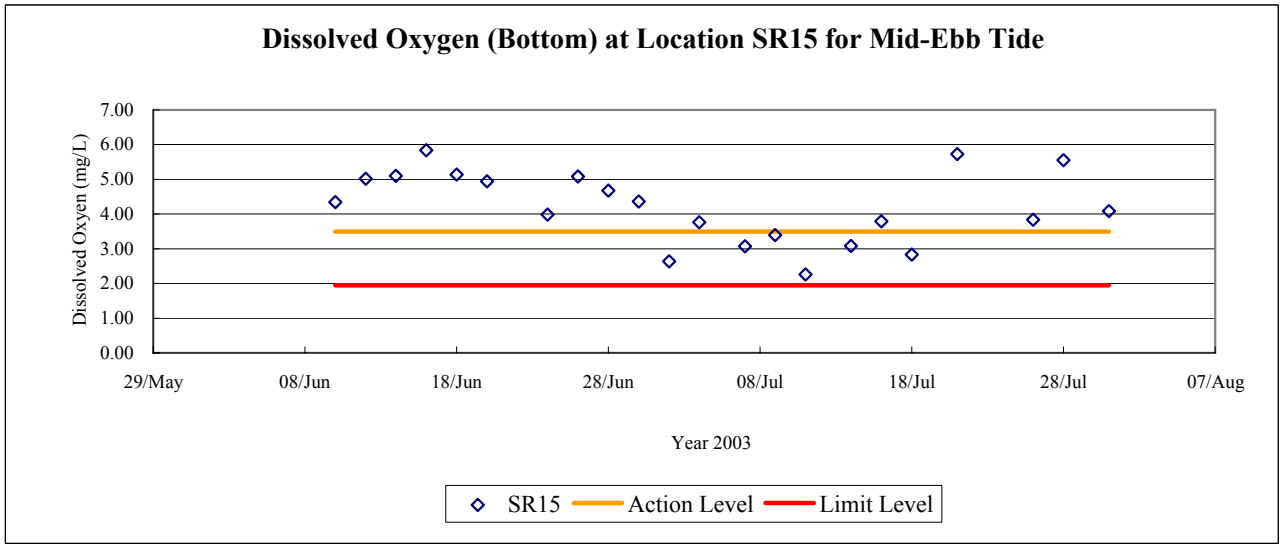

Dissolved Oxygen (Surface & Middle) at Location SR14 for Mid-Ebb Tide
Dissolved Oxygen (mg/L)
10.00
8.00
6.00
4.00
2.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level

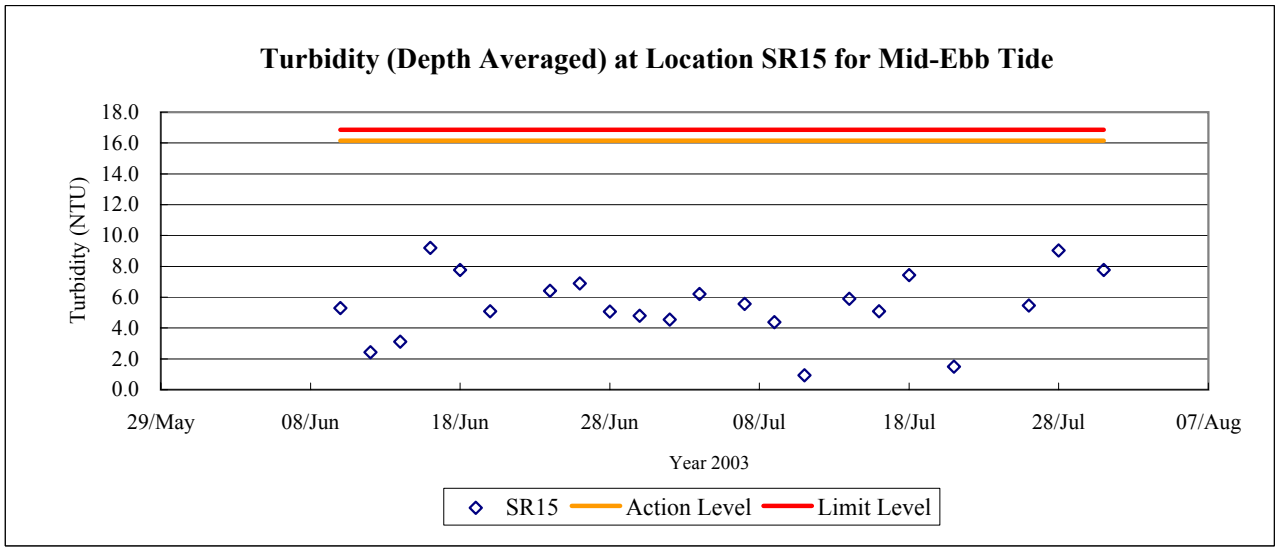

Dissolved Oxygen (Bottom) at Location SR14 for Mid-Ebb Tide
Dissolved Oxyen (mg/L)
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level

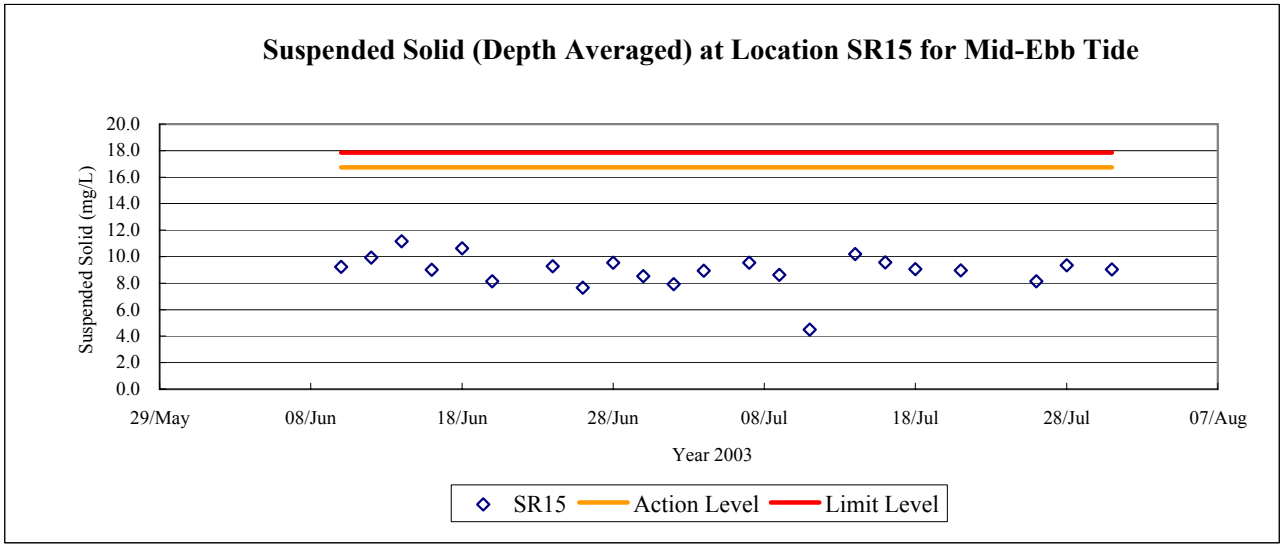

Turbidity (Depth Averaged) at Location SR14 for Mid-Ebb Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level


Suspended Solid (Depth Averaged) at Location SR14 for Mid-Ebb Tide
Suspended Solid (mg/L)
20.0
15.0
10.0
5.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR14
Action Level
Limit Level

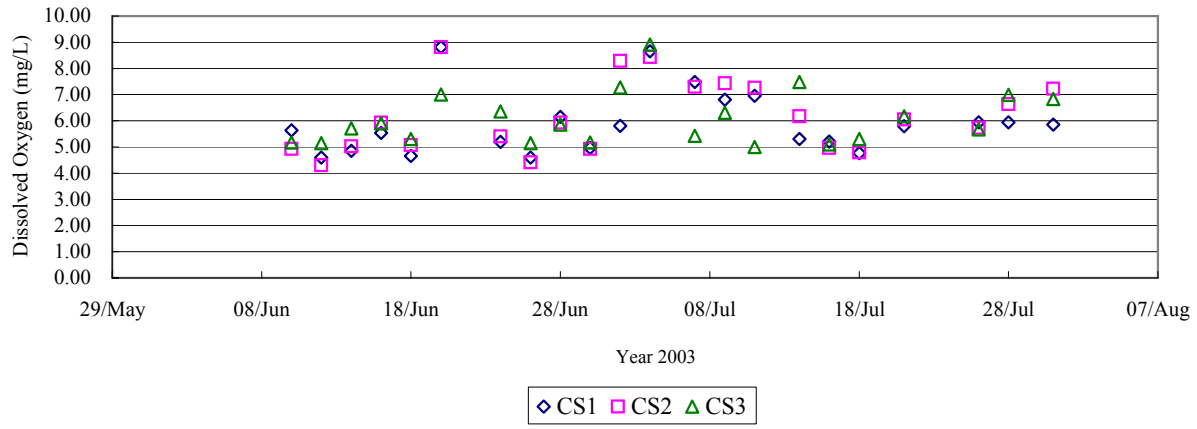

Dissolved Oxygen (Surface & Middle) at Location SR15 for Mid-Ebb Tide
Dissolved Oxygen (mg/L)
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level


Dissolved Oxygen (Bottom) at Location SR15 for Mid-Ebb Tide
Dissolved Oxyen (mg/L)
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level

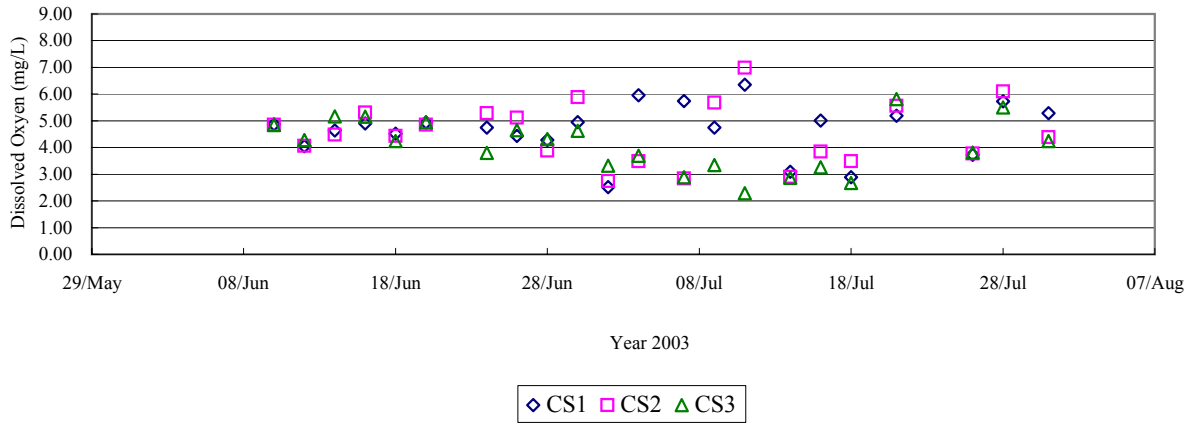

Turbidity (Depth Averaged) at Location SR15 for Mid-Ebb Tide
Turbidity (NTU)
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level


Suspended Solid (Depth Averaged) at Location SR15 for Mid-Ebb Tide
Suspended Solid (mg/L)
20.0
18.0
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
SR15
Action Level
Limit Level

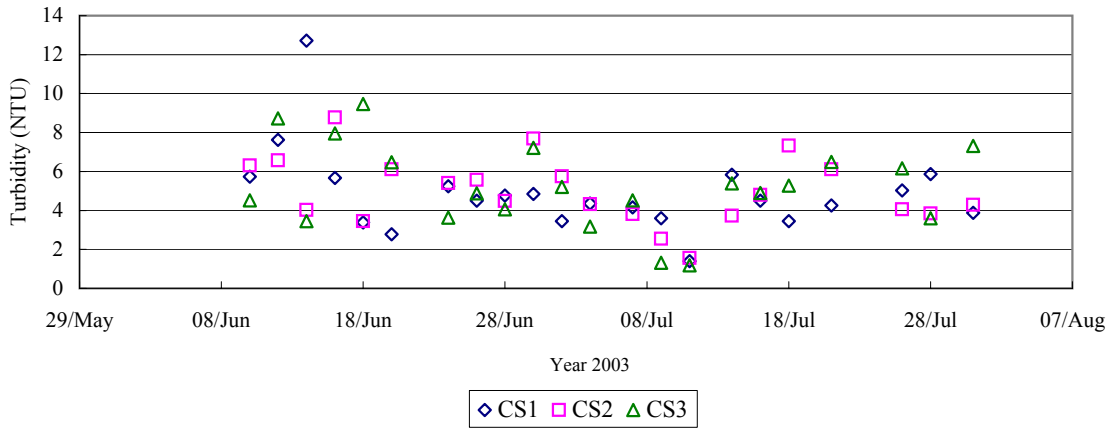
Dissolved Oxygen (Surface & Middle) from CS1 to CS3 for Mid-Ebb Tide

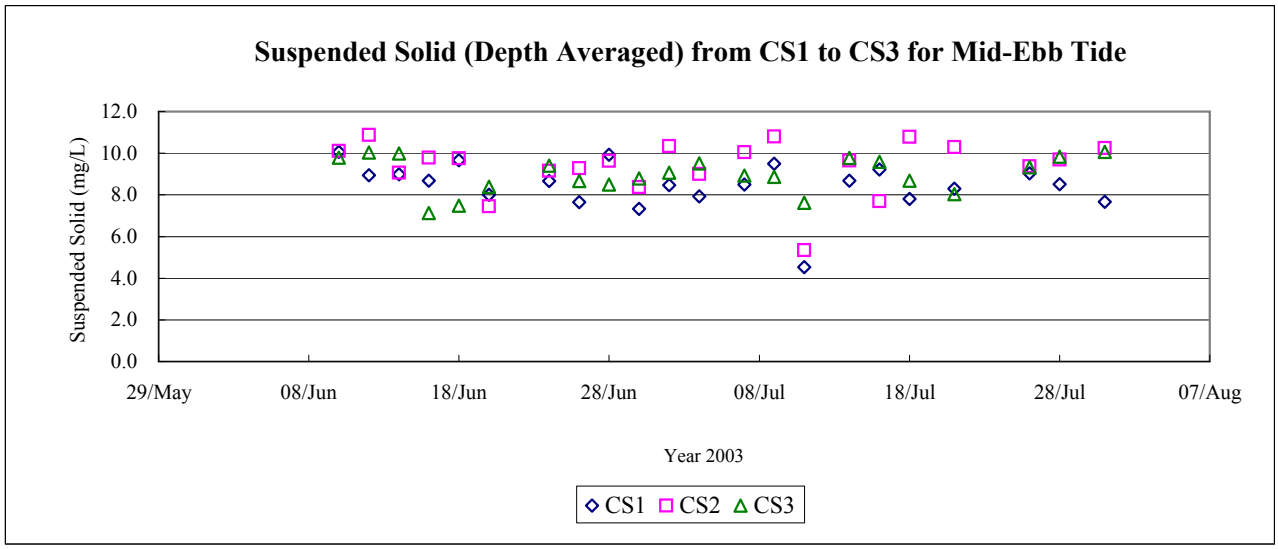


Dissolved Oxygen (Bottom) from CS1 to CS3 for Mid-Ebb Tide



Turbidity (Depth Averaged) from CS1 to CS3 for Mid-Ebb Tide




Suspended Solid (Depth Averaged) from CS1 to CS3 for Mid-Ebb Tide
Suspended Solid (mg/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
29/May
08/Jun
18/Jun
28/Jun
08/Jul
18/Jul
28/Jul
07/Aug
Year 2003
CS1
CS2
CS3

Appendix F

Calibration Records and Laboratory QA/QC Results

Equipment Calibration Record

Equipment No.	YSI - 6820-1	Equipment Description	YSI 6820 Monitor
Calibration method reference	YSI Calibration Manual	Calibration equipment used (if any)	—

	pH	DO	Turbidity
Use of reference material (if any)	pH 7.00 & pH 10.00 Hach Buffer Standard	—	0 NTU & 100 NTU Formazin Turbidity Standard
Permissible tolerance of calibration	± 0.12 pH	± 5 %	± 5 %

Calibration Result

Date	Standard	pH		DO	Turbidity		Calibrated by
		7.00	10.00	100 %	0	100	
2/7/03	Before	7.00	10.02	95.7	0.2	100.2	TLW
	After	7.01	9.98	96.8	-0.1	100.4	TLW
4/7/03	Before	7.02	10.01	99.1	-0.3	102.3	TLW
	After	7.00	9.99	98.9	0	99.7	TLW
7/7/03	Before	7.03	9.98	100.0	0.2	100.6	TLW
	After	6.99	10.02	99.9	-0.2	99.5	TLW
9/7/03	Before	6.98	9.99	98.8	0.3	98.1	TLW
	After	7.01	10.00	99.6	0.2	97.4	TLW
11/7/03	Before	6.99	10.01	98.2	-0.1	98.8	TLW
	After	7.00	9.99	98.4	0	100.1	TLW
14/7/03	Before	7.01	10.02	96.2	-0.2	98.3	TLW
	After	6.99	9.99	97.5	0.3	98.4	TLW
16/7/03	Before	6.97	10.02	99.2	0.1	100.8	WH Tsang
	After	7.00	9.98	98.7	-0.2	100.2	WH Tsang
18/7/03	Before	6.98	10.02	97.5	0	101.5	Wunkee
	After	7.02	10.00	98.3	0.1	99.4	Wunkee
21/7/03	Before	6.98	9.97	100.0	-0.3	98.7	Wunkee
	After	7.00	9.99	99.4	0	101.3	Wunkee
26/7/03	Before	6.97	10.01	98.7	0.2	100.6	WH Tsang
	After	7.03	10.03	99.9	0	99.2	WH Tsang
28/7/03	Before	6.99	9.98	96.3	0.1	100.2	Wunkee
	After	6.99	9.97	98.6	0.2	99.2	Wunkee
31/7/03	Before	7.02	10.01	91.2	-0.3	101.4	TLW
	After	6.98	9.97	95.7	-0.1	98.1	TLW
	Before						
	After						
	Before						
	After						

Approved by: CK Date: 1/8/2003

SUMMARY OF QUALITY CONTROL DATA – QC SAMPLES RESULTS

Parameter	Control Limit	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	QC ID	Measured Value	
Suspended Solids mg/L	89 – 103%	P0307A14	94%	P0307A28	96%	P0307A41	94%	P0307A56	95%	P0307A70	93%	P0307A83	95%	P0307B14	97%	
		P0307B28	94%	P0307B41	95%	P0307B56	93%	P0307B70	97%	P0307B83	95%	P0307C14	95%	P0307C28	97%	
		P0307C41	96%	P0307C56	94%	P0307C70	94%	P0307C83	95%	P0307D14	96%	P0307D28	98%	P0307D41	95%	
		P0307D56	94%	P0307D70	96%	P0307D83	96%	P0307E14	94%	P0307E28	95%	P0307E41	97%	P0307E56	94%	
		P0307E70	97%	P0307E83	94%	P0307F14	97%	P0307F28	94%	P0307F41	96%	P0307F56	97%	P0307F70	95%	
		P0307F83	94%	P0307G14	95%	P0307G28	94%	P0307G41	94%	P0307G56	95%	P0307G70	96%	P0307G83	94%	
		P0307H14	96%	P0307H28	94%	P0307H41	95%	P0307H56	97%	P0307H70	94%	P0307H83	93%	P0307I14	95%	
		P0307I28	94%	P0307I41	95%	P0307I56	97%	P0307I70	94%	P0307I83	96%	P0307J14	95%	P0307J28	94%	
		P0307J41	95%	P0307J56	97%	P0307J70	94%	P0307J83	96%	P0307K14	96%	P0307K28	94%	P0307K41	95%	
		P0307K56	97%	P0307K70	94%	P0307K83	96%	P0307L14	97%	P0307L28	95%	P0307L41	94%	P0307L56	96%	
		P0307L70	95%	P0307L83	96%											Total:72

SUMMARY OF QUALITY CONTROL DATA – BLANK RESULTS

Parameter	Control Limit	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value	Blank ID	Measured Value
Suspended Solids mg/L	<1	P0307A15	<1	P0307A29	<1	P0307A42	<1	P0307A57	<1	P0307A71	<1	P0307A84	<1	P0307B15	<1
		P0307B29	<1	P0307B42	<1	P0307B57	<1	P0307B71	<1	P0307B84	<1	P0307C15	<1	P0307C29	<1
		P0307C42	<1	P0307C57	<1	P0307C71	<1	P0307C84	<1	P0307D15	<1	P0307D29	<1	P0307D42	<1
		P0307D57	<1	P0307D71	<1	P0307D84	<1	P0307E15	<1	P0307E29	<1	P0307E42	<1	P0307E57	<1
		P0307E71	<1	P0307E84	<1	P0307F15	<1	P0307F29	<1	P0307F42	<1	P0307F57	<1	P0307F71	<1
		P0307F84	<1	P0307G15	<1	P0307G29	<1	P0307G42	<1	P0307G57	<1	P0307G71	<1	P0307G84	<1
		P0307H15	<1	P0307H29	<1	P0307H42	<1	P0307H57	<1	P0307H71	<1	P0307H84	<1	P0307I15	<1
		P0307I29	<1	P0307I42	<1	P0307I57	<1	P0307I71	<1	P0307I84	<1	P0307J15	<1	P0307J29	<1
		P0307J42	<1	P0307J57	<1	P0307J71	<1	P0307J84	<1	P0307K15	<1	P0307K29	<1	P0307K42	<1
		P0307K57	<1	P0307K71	<1	P0307K84	<1	P0307L15	<1	P0307L29	<1	P0307L42	<1	P0307L57	<1
		P0307L71	<1	P0307L84	<1										

Total:72

SUMMARY OF QUALITY CONTROL DATA – DUPLICATE RESULTS

Parameter	Control Limit	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value
Suspended Solids mg/L	Exceed 20%	P0307A13	8.6	P0307A27	12.4	P0307A40	11.3	P0307A55	7.7	P0307A69	12.1	P0307A82	10.2	P0307B13	8.4
			8.7		12.2		10.9		7.5		12.6		10.6		8.7
		P0307B27	12.9	P0307B40	12.8	P0307B55	9.5	P0307B69	10.7	P0307B82	11.6	P0307C13	10.2	P0307C27	11.2
			12.3		12.2		9.9		9.8		12.4		11.1		11.5
		P0307C40	12.9	P0307C55	8.4	P0307C69	12.3	P0307C82	12.3	P0307D13	10.5	P0307D27	10.1	P0307D40	10.7
			13.2		8.8		12.7		11.3		11.0		10.6		11.7
		P0307D55	9.3	P0307D69	11.6	P0307D82	12.1	P0307E13	7.2	P0307E27	6.1	P0307E40	5.0	P0307E55	9.4
			9.6		12.0		11.9		7.5		5.7		4.4		9.9
		P0307E69	13.4	P0307E82	9.4	P0307F13	10.2	P0307F27	10.5	P0307F40	11.3	P0307F55	9.3	P0307F69	13.2
			13.3		11.0		10.7		10.8		12.1		9.8		12.2
		P0307F82	11.6	P0307G13	9.1	P0307G27	13.2	P0307G40	11.9	P0307G55	8.7	P0307G69	11.7	P0307G82	12.4
			11.9		8.9		12.3		11.3		9.0		10.8		12.0
		P0307H13	9.1	P0307H27	10.6	P0307H40	11.2	P0307H55	7.7	P0307H69	10.3	P0307H82	10.8	P0307I13	7.1
			9.4		11.3		12.1		7.4		9.8		10.3		7.2
		P0307I27	13.7	P0307I40	12.8	P0307I55	9.3	P0307I69	12.8	P0307I82	11.3	P0307J13	7.5	P0307J27	13.1
			13.3		12.5		8.9		11.8		11.0		8.0		12.8
		P0307J40	9.8	P0307J55	10.2	P0307J69	11.3	P0307J82	12.4	P0307K13	8.3	P0307K27	11.3	P0307K40	11.4
			9.6		10.5		10.5		12.0		9.1		11.0		11.5
		P0307K55	7.8	P0307K69	12.4	P0307K82	11.2	P0307L13	11.5	P0307L27	10.5	P0307L40	11.4	P0307L55	9.1
			8.0		12.0		11.0		11.1		11.2		11.1		10.0
		P0307L69	11.1	P0307L82	10.5										
			11.3		10.7										

Total:72

SUMMARY OF QUALITY CONTROL DATA – BLIND DUPLICATE RESULTS

Parameter	Control Limit	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value	Sample ID	Measured Value
Suspended Solids mg/L	Exceed 20%	P0307A05	7.0	P0307A11	6.2	P0307A20	6.5	P0307A25	9.9	P0307A33	5.0	P0307A38	8.5	P0307A47	11.2	P0307A53	5.3	P0307A62	4.5	P0307A67	9.9	P0307A75	5.2	P0307A80	8.0
			7.7		6.5		6.6		9.7		5.1		8.3		10.6		5.6		4.6		10.2		5.1		8.2
		P0307B05	7.2	P0307B11	7.5	P0307B20	5.6	P0307B25	10.6	P0307B33	7.5	P0307B38	9.1	P0307B47	8.5	P0307B53	8.4	P0307B62	6.2	P0307B67	7.5	P0307B75	7.4	P0307B80	8.5
			7.8		8.1		6.1		10.8		7.3		8.9		8.8		7.9		6.6		8.1		7.8		8.9
		P0307C05	10.2	P0307C11	8.6	P0307C20	5.9	P0307C25	7.9	P0307C33	5.8	P0306C38	10.6	P0307C47	9.9	P0307C53	6.2	P0307C62	8.7	P0307C67	10.4	P0307C75	7.9	P0307C80	9.5
			10.6		8.5		6.1		8.1		6.0		10.2		10.2		6.1		8.9		10.1		8.0		9.7
		P0307D05	10.2	P0307D11	7.3	P0307D20	5.8	P0307D25	7.7	P0307D33	7.8	P0307D38	8.1	P0307D47	10.5	P0307D53	7.5	P0307D62	8.4	P0307D67	9.7	P0307D75	7.1	P0307D80	9.4
			11.1		7.8		6.1		8.0		8.5		8.3		10.0		7.8		8.2		10.0		7.3		9.9
		P0307E05	5.6	P0307E11	6.7	P0307E20	4.1	P0307E25	6.0	P0307E33	4.3	P0307E38	4.6	P0307E47	5.3	P0307E53	4.2	P0307E62	5.9	P0307E67	6.4	P0307E75	3.9	P0307E80	6.9
			5.4		5.6		3.6		6.6		4.5		4.0		6.3		4.4		5.9		7.5		3.8		7.6
		P0307F05	9.5	P0307F11	7.6	P0307F20	6.2	P0307F25	7.9	P0307F33	6.8	P0307F38	10.7	P0307F47	9.8	P0307F53	7.4	P0307F62	6.6	P0307F67	11.4	P0307F75	8.1	P0307F80	9.5
			9.8		7.3		6.3		8.2		7.0		9.8		10.2		7.1		6.8		11.0		8.3		9.9
		P0307G05	8.5	P0307G11	7.7	P0307G20	7.5	P0307G25	10.4	P0307G33	8.7	P0307G38	9.5	P0307G47	7.4	P0307G53	6.2	P0307G62	8.9	P0307G67	8.7	P0307G75	8.1	P0307G80	9.4
			9.1		7.3		7.9		10.8		9.0		9.1		7.8		6.3		8.4		8.5		7.9		9.8
		P0307H05	8.2	P0307H11	6.8	P0307H20	8.3	P0307H25	7.6	P0307H33	7.1	P0307H38	8.4	P0307H47	10.2	P0307H53	5.5	P0307H62	6.5	P0307H67	6.5	P0307H75	6.1	P0307H80	9.2
			8.1		7.1		8.7		8.0		6.7		9.1		10.8		5.2		6.9		6.8		6.0		9.4
		P0307I05	8.6	P0307I11	5.2	P0307I20	6.1	P0307I25	11.3	P0307I33	8.2	P0307I38	10.2	P0307I47	9.4	P0307I53	7.7	P0307I62	6.3	P0307I67	11.8	P0307I75	8.2	P0307I80	8.7
			8.2		5.3		6.1		12.2		8.4		10.4		10.2		7.2		6.7		11.3		8.3		8.8
		P0307J05	9.3	P0307J11	5.3	P0307J20	6.8	P0307J25	10.6	P0307J33	8.1	P0307J38	7.8	P0307J47	8.5	P0307J53	7.6	P0307J62	6.6	P0307J67	8.2	P0307J75	8.6	P0307J80	10.3
			9.7		5.6		6.5		10.2		8.3		7.4		8.8		7.8		6.8		8.4		9.0		10.8
		P0307K05	9.3	P0307K11	6.1	P0307K20	6.8	P0307K25	7.8	P0307K33	8.2	P0307K38	9.2	P0307K47	7.6	P0307K53	6.2	P0307K62	5.7	P0307K67	10.3	P0307K75	6.3	P0307K80	8.5
			10.1		6.2		7.0		8.3		8.4		9.4		7.9		6.0		5.8		10.0		6.3		9.2
		P0307L05	7.5	P0307L11	8.5	P0307L20	7.7	P0307L25	9.7	P0307L33	8.6	P0307L38	9.1	P0307L47	10.2	P0307L53	6.4	P0307L62	6.4	P0307L67	8.1	P0307L75	9.1	P0307L80	9.7
			7.8		9.0		8.2		9.3		8.5		8.9		9.9		7.0		6.8		8.3		9.8		9.1
																											Total:144

Appendix G Event/Action Plans

Exceedance	ET Leader	IEC	Engineer	Contractor
Action level exceeded on one sampling day	Verbally inform the Contractor, and IEC. Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measures with IEC, Engineer and Contractor; Repeat measurement on next day of exceedance.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures	Discuss with Contractor the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose and discuss mitigation measures with Engineer; Implement the agreed mitigation measures.
Action level exceeded on more than one consecutive sampling day	Repeat in-situ measurements to confirm findings; Identify source(s) of impact; Inform Contractor and IEC; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measure with IEC, Engineer and Contractor; Ensure mitigation measures are implemented; Prepare to increase the monitoring frequency to daily; Repeat measurement on next day of exceedance.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures	Discuss with ET and Contractor on the proposed mitigation measures; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer within 3 working days and discuss with ET and Engineer; Implement the agreed mitigation measures.

Exceedance	ET Leader	IEC	Engineer	Contractor
Limit level exceeded on one sampling day	Verbally inform the Contractor, IEC and the EPD of the exceedance; Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measure with IEC, Engineer and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures	Discuss with Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer within 3 working days and discuss with Engineer; Implement the agreed mitigation measures.
Limit level exceeded by more than one consecutive sampling day	Repeat in-situ measurement to confirm findings; Identify source(s) of impact; Inform Contractor, IEC and EPD; Check monitoring data, all plant, equipment and Contractor's working methods; Discuss mitigation measure with IEC, Engineer and Contractor; Ensure mitigation measures are implemented; Increase the monitoring frequency to daily until no exceedance of Limit level for two consecutive days.	Provide feedback to the Engineer on the remedial actions proposed by the ET / Contractor Advise Engineer on the effectiveness of the proposed remedial measures Verify the implementation of the remedial measures	Discuss with Contractor on the proposed mitigation measures; Request Contractor to critically review the working methods; Make agreement on the mitigation measures to be implemented; Assess the effectiveness of the implemented mitigation measures; Consider and instruct, if necessary, the Contractor to slow down or to stop all or part of the marine works until no exceedance of the Limit Level.	Inform the Engineer and confirm notification of the non-compliance in writing; Rectify unacceptable practice; Check all plant and equipment; Consider changes of working methods; Propose mitigation measures to Engineer within 3 working days and discuss with Engineer; Implement the agreed mitigation measures.. As directed by the Engineer, to slow down or to stop all or part of the marine work

Appendix H

Site Audit Summary

The Hongkong Electric Co. Ltd.
Lamma Power Station Navigation Channel Improvement Project
Weekly Site Inspection Checklist

Inspection date: 2/7/03 Time: 15:00 Inspected By: ET: Stanley Chan; Contractor: K.K. Cheung

Site: LPS - Navigation Channel

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature 32 °C **Humidity** ☐ High ☑ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

GENERAL

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in Engineers' and Contractors' offices for inspection at all sites/offices covered in the permit ?		✓			
EP 1.5	Is a copy of the most up-to-date Environmental Permit displayed at on the construction site at a convenient location for public information?		✓			

WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
EM&A: 5.4	Does the contractor possess valid dumping permits for dredged marine mud and have them available for inspection?		✓			
EM&A: 5.4	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?		✓			
EM&A: 3.2.5	Are wastes disposed of at designated marine dumping sites approved by the Marine Fill Committee of the Civil Engineering Department?		✓			

WATER QUALITY & MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.2 EM&A: A1	Is dredging work prohibited at Working Zone BCs from February to April to protect Finless Porpoise during calving seasons?		✓			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.3 EM&A: A2	Do marine vessels avoid the Finless Porpoise habitat area when moving from and to disposal sites?		✓			
EM&A: A2	Is marine vessel speed subject to a maximum limit of 10 knots in southern Lamma waters?		✓			
EP: 3.4 EM&A: A4	Are grab dredger option and TSHD option prohibited to operate concurrently?		✓			
EP: 3.5 EM&A: C1	Is dredging work carried out in phases in accordance with the latest dredging schedule?		✓			
EP:3.5 EM&A: C2	Does each of the deployed grab dredgers have a grab capacity of no less than $8m^3$?		✓			
EP:3.5 EM&A: C3	Are cage-type silt curtains deployed for grab dredgers?		✓			
EP:3.5 EM&A: C3	Are the silt curtains maintained properly throughout the dredging operation?		✓			
EP: 3.5 EM&A: C4	Is it prohibited to operate more than 5 grab dredgers concurrently at anytime?		✓			
EM&A: D1	Is daily dredging volume spread as evenly as possible over the 24 hour period whenever practical?		✓			
EM&A: D1	Is special care taken during lowering and lifting grabs to minimize unnecessary disturbance to the seabed?		✓			
EM&A: D1	Do vessels have adequate clearance to the seabed?		✓			
EM&A: D1	Are barges fitted with tight fitting seals to their bottom openings to prevent leakage of material during loading and transportation?		✓			
EM&A: D1	Are grabs closed tightly to minimize loss of sediment during dredging		✓			
EM&A: D1	Is the descent speed of hoist controlled suitably low?		✓			
EM&A: D1	Are barges filled to a level, which ensures that materials do not spill over during loading and transportation?		✓			
EM&A: D1	Are large objects removed from the grab to avoid losses from partially closed grabs?	✓				
EM&A: D2	Have the vessel operators been fully briefed on the following: a) Possible presence of dolphins and porpoises in the vicinity of the Study Area and along routes to the Project Area; b) Rules for safe vessel operation around cetaceans; c) Slowing to 10 knots in the presence of cetaceans within the area marked on Figure B3 (Annex B of EM&A Manual); and d) The dumping of chemicals, rubbish, oils etc into the waters is strictly prohibited and enforced.		✓			

NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
NCO	Are valid construction noise permits, if required, available for inspection?		✓			
EM&A: A3	Is the number of dredgers and operation conditions strictly followed as specified in the CNP.		✓			
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?		✓			

Abbreviation

EP:	Environmental Permit (Environmental Permit No. EP-165/2003)
EM&A:	EM&A Manual (Construction Phase)
NCO:	Noise Control Ordinance
Unk:	Unknown

Remark

NIL.

Signatures

ET Member

(Name in Block letters: GANLEX CHAN)

Contractor's Representative

(Name in Block letters: 張文林)

The Hongkong Electric Co. Ltd.
Lamma Power Station Navigation Channel Improvement Project
Weekly Site Inspection Checklist

Inspection date: 31/7/03 Time: 10:30 am Inspected By: ET: Stanley Chan; Contractor: K. K. Cheung

Site: LPS- Navigation Channel Improvement

Weather

Condition ☑ Sunny ☐ Fine ☐ Overcast ☐ Hazy ☐ Drizzle ☐ Rain ☐ Storm

Temperature ☐ °C **Humidity** ☐ High ☑ Moderate ☐ Low

Wind ☐ Calm ☑ Light ☐ Breeze ☐ Strong

GENERAL

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in Engineers' and Contractors' offices for inspection at all sites/offices covered in the permit ?		✓			
EP 1.5	Is a copy of the most up-to-date Environmental Permit displayed at on the construction site at a convenient location for public information?		✓			

WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
EM&A: 5.4	Does the contractor possess valid dumping permits for dredged marine mud and have them available for inspection?		✓			
EM&A: 5.4	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?		✓			
EM&A: 3.2.5	Are wastes disposed of at designated marine dumping sites approved by the Marine Fill Committee of the Civil Engineering Department?		✓			

WATER QUALITY & MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.2 EM&A: A1	Is dredging work prohibited at Working Zone BCs from February to April to protect Finless Porpoise during calving seasons?		✓			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.3 **EM&A: A2**	Do marine vessels avoid the Finless Porpoise habitat area when moving from and to disposal sites?		✓			
EM&A: A2	Is marine vessel speed subject to a maximum limit of 10 knots in southern Lamma waters?		✓			
EP: 3.4 **EM&A: A4**	Are grab dredger option and TSHD option prohibited to operate concurrently?		✓			
EP: 3.5 **EM&A: C1**	Is dredging work carried out in phases in accordance with the latest dredging schedule?		✓			
EP:3.5 **EM&A: C2**	Does each of the deployed grab dredgers have a grab capacity of no less than $8m^3$?		✓			
EP:3.5 **EM&A: C3**	Are cage-type silt curtains deployed for grab dredgers?		✓			
EP:3.5 **EM&A: C3**	Are the silt curtains maintained properly throughout the dredging operation?		✓			
EP: 3.5 **EM&A: C4**	Is it prohibited to operate more than 5 grab dredgers concurrently at anytime?		✓			
EM&A: D1	Is daily dredging volume spread as evenly as possible over the 24 hour period whenever practical?		✓			
EM&A: D1	Is special care taken during lowering and lifting grabs to minimize unnecessary disturbance to the seabed?		✓			
EM&A: D1	Do vessels have adequate clearance to the seabed?		✓			
EM&A: D1	Are barges fitted with tight fitting seals to their bottom openings to prevent leakage of material during loading and transportation?		✓			
EM&A: D1	Are grabs closed tightly to minimize loss of sediment during dredging		✓			
EM&A: D1	Is the descent speed of hoist controlled suitably low?		✓			
EM&A: D1	Are barges filled to a level, which ensures that materials do not spill over during loading and transportation?		✓			
EM&A: D1	Are large objects removed from the grab to avoid losses from partially closed grabs?	✓				
EM&A: D2	Have the vessel operators been fully briefed on the following: a) Possible presence of dolphins and porpoises in the vicinity of the Study Area and along routes to the Project Area; b) Rules for safe vessel operation around cetaceans; c) Slowing to 10 knots in the presence of cetaceans within the area marked on Figure B3 (Annex B of EM&A Manual); and d) The dumping of chemicals, rubbish, oils etc into the waters is strictly prohibited and enforced.		✓			

NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
NCO	Are valid construction noise permits, if required, available for inspection?		✓			
EM&A: A3	Is the number of dredgers and operation conditions strictly followed as specified in the CNP.		✓			
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?		✓			

Abbreviation

EP:	Environmental Permit (Environmental Permit No. EP-165/2003)
EM&A:	EM&A Manual (Construction Phase)
NCO:	Noise Control Ordinance
Unk:	Unknown

Remark

1 Grab unloading of dredged mud to be made as evenly as possible to minimise tilting of hopper barge. This is to prevent spilling of the dredged water from hopper barge into the sea.

2. Sufficient weight to be provided to sink the silt curtain.

Signatures

ET Member

(Name in Block letters:
STANLEY CHAN)

Contractor's Representative

(Name in Block letters:
CHEUNG KWONG KUEN)

IEC's Representative
This site inspection was carried out in the presence of the IEC's representative

[redacted]

Name in Block Letters:
(GABRIEL C K LAM
NATURE & TECHNOLOGIES (HK) LTD)

The Hongkong Electric Co. Ltd.
Lamma Power Station Navigation Channel Improvement Project
Weekly Site Inspection Checklist

Inspection date	9/7/03	Time	15:00	Inspected By	ET: Stanley Chan Contractor: K.K. Cheung
Site	LPS - Navigation Channel Improvement				

Weather

Condition	☑ Sunny	☐ Fine	☐ Overcast	☐ Hazy	☐ Drizzle	☐ Rain	☐ Storm	
Temperature	33 °C	**Humidity**	☐ High	☑ Moderate	☐ Low			
Wind	☐ Calm	☑ Light	☐ Breeze	☐ Strong				

GENERAL

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in Engineers' and Contractors' offices for inspection at all sites/offices covered in the permit ?		✓			
EP 1.5	Is a copy of the most up-to-date Environmental Permit displayed at on the construction site at a convenient location for public information?		✓			

WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
EM&A: 5.4	Does the contractor possess valid dumping permits for dredged marine mud and have them available for inspection?		✓			
EM&A: 5.4	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?		✓			
EM&A: 3.2.5	Are wastes disposed of at designated marine dumping sites approved by the Marine Fill Committee of the Civil Engineering Department?		✓			

WATER QUALITY & MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.2 EM&A: A1	Is dredging work prohibited at Working Zone BCs from February to April to protect Finless Porpoise during calving seasons?		✓			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.3 EM&A: A2	Do marine vessels avoid the Finless Porpoise habitat area when moving from and to disposal sites?		✓			
EM&A: A2	Is marine vessel speed subject to a maximum limit of 10 knots in southern Lamma waters?		✓			
EP: 3.4 EM&A: A4	Are grab dredger option and TSHD option prohibited to operate concurrently?		✓			
EP: 3.5 EM&A: C1	Is dredging work carried out in phases in accordance with the latest dredging schedule?		✓			
EP:3.5 EM&A: C2	Does each of the deployed grab dredgers have a grab capacity of no less than $8m^3$?		✓			
EP:3.5 EM&A: C3	Are cage-type silt curtains deployed for grab dredgers?		✓			
EP:3.5 EM&A: C3	Are the silt curtains maintained properly throughout the dredging operation?		✓			
EP: 3.5 EM&A: C4	Is it prohibited to operate more than 5 grab dredgers concurrently at anytime?		✓			
EM&A: D1	Is daily dredging volume spread as evenly as possible over the 24 hour period whenever practical?		✓			
EM&A: D1	Is special care taken during lowering and lifting grabs to minimize unnecessary disturbance to the seabed?		✓			
EM&A: D1	Do vessels have adequate clearance to the seabed?		✓			
EM&A: D1	Are barges fitted with tight fitting seals to their bottom openings to prevent leakage of material during loading and transportation?		✓			
EM&A: D1	Are grabs closed tightly to minimize loss of sediment during dredging		✓			
EM&A: D1	Is the descent speed of hoist controlled suitably low?		✓			
EM&A: D1	Are barges filled to a level, which ensures that materials do not spill over during loading and transportation?		✓			
EM&A: D1	Are large objects removed from the grab to avoid losses from partially closed grabs?	✓				
EM&A: D2	Have the vessel operators been fully briefed on the following: a) Possible presence of dolphins and porpoises in the vicinity of the Study Area and along routes to the Project Area; b) Rules for safe vessel operation around cetaceans; c) Slowing to 10 knots in the presence of cetaceans within the area marked on Figure B3 (Annex B of EM&A Manual); and d) The dumping of chemicals, rubbish, oils etc into the waters is strictly prohibited and enforced.		✓			

NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
NCO	Are valid construction noise permits, if required, available for inspection?		✓			
EM&A: A3	Is the number of dredgers and operation conditions strictly followed as specified in the CNP.		✓			
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?		✓			

Abbreviation

EP:	Environmental Permit (Environmental Permit No. EP-165/2003)
EM&A:	EM&A Manual (Construction Phase)
NCO:	Noise Control Ordinance
Unk:	Unknown

Remark

NIL.

Signatures

ET Member

(Name in Block letters:
STANLEY CHAN)

Contractor's Representative

(Name in Block letters:
CHEUNG KWONG KUEN)

The Hongkong Electric Co. Ltd.
Lamma Power Station Navigation Channel Improvement Project
Weekly Site Inspection Checklist

Inspection date: 16/7/03 Time: 15:00 Inspected By: ET: Stanley Chan; Contractor: K.K. Cheung

Site: LPS - Navigation Channel Improvement.

Weather

Condition [✓] Sunny [ ] Fine [ ] Overcast [ ] Hazy [ ] Drizzle [ ] Rain [ ] Storm

Temperature 32 °C **Humidity** [ ] High [✓] Moderate [ ] Low

Wind [ ] Calm [ ] Light [✓] Breeze [ ] Strong

GENERAL

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in Engineers' and Contractors' offices for inspection at all sites/offices covered in the permit ?		✓			
EP 1.5	Is a copy of the most up-to-date Environmental Permit displayed at on the construction site at a convenient location for public information?		✓			

WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
EM&A: 5.4	Does the contractor possess valid dumping permits for dredged marine mud and have them available for inspection?		✓			
EM&A: 5.4	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?		✓			
EM&A: 3.2.5	Are wastes disposed of at designated marine dumping sites approved by the Marine Fill Committee of the Civil Engineering Department?		✓			

WATER QUALITY & MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.2 EM&A: A1	Is dredging work prohibited at Working Zone BCs from February to April to protect Finless Porpoise during calving seasons?		✓			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.3 EM&A: A2	Do marine vessels avoid the Finless Porpoise habitat area when moving from and to disposal sites?		✓			
EM&A: A2	Is marine vessel speed subject to a maximum limit of 10 knots in southern Lamma waters?		✓			
EP: 3.4 EM&A: A4	Are grab dredger option and TSHD option prohibited to operate concurrently?		✓			
EP: 3.5 EM&A: C1	Is dredging work carried out in phases in accordance with the latest dredging schedule?		✓			
EP:3.5 EM&A: C2	Does each of the deployed grab dredgers have a grab capacity of no less than $8m^3$?		✓			
EP:3.5 EM&A: C3	Are cage-type silt curtains deployed for grab dredgers?		✓			
EP:3.5 EM&A: C3	Are the silt curtains maintained properly throughout the dredging operation?		✓			
EP: 3.5 EM&A: C4	Is it prohibited to operate more than 5 grab dredgers concurrently at anytime?		✓			
EM&A: D1	Is daily dredging volume spread as evenly as possible over the 24 hour period whenever practical?		✓			
EM&A: D1	Is special care taken during lowering and lifting grabs to minimize unnecessary disturbance to the seabed?		✓			
EM&A: D1	Do vessels have adequate clearance to the seabed?		✓			
EM&A: D1	Are barges fitted with tight fitting seals to their bottom openings to prevent leakage of material during loading and transportation?		✓			
EM&A: D1	Are grabs closed tightly to minimize loss of sediment during dredging		✓			
EM&A: D1	Is the descent speed of hoist controlled suitably low?		✓			
EM&A: D1	Are barges filled to a level, which ensures that materials do not spill over during loading and transportation?		✓			
EM&A: D1	Are large objects removed from the grab to avoid losses from partially closed grabs?	✓				
EM&A: D2	Have the vessel operators been fully briefed on the following: a) Possible presence of dolphins and porpoises in the vicinity of the Study Area and along routes to the Project Area; b) Rules for safe vessel operation around cetaceans; c) Slowing to 10 knots in the presence of cetaceans within the area marked on Figure B3 (Annex B of EM&A Manual); and d) The dumping of chemicals, rubbish, oils etc into the waters is strictly prohibited and enforced.		✓			

NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
NCO	Are valid construction noise permits, if required, available for inspection?		✓			
EM&A: A3	Is the number of dredgers and operation conditions strictly followed as specified in the CNP.		✓			
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?		✓			

Abbreviation

EP:	Environmental Permit (Environmental Permit No. EP-165/2003)
EM&A:	EM&A Manual (Construction Phase)
NCO:	Noise Control Ordinance
Unk:	Unknown

Remark

NIL

Signatures

ET Member

(Name in Block letters:
STANLEY CHAN)

Contractor's Representative

(Name in Block letters:
CHEUNG KWONG KUEN

The Hongkong Electric Co. Ltd.
Lamma Power Station Navigation Channel Improvement Project
Weekly Site Inspection Checklist

Inspection date	25/7/03	Time	10:00	Inspected By	ET: Stanley Chan Contractor: K.K. Cheung
Site	LPS - Navigation Channel Improvement				

Weather

Condition	☐ Sunny	☐ Fine	☐ Overcast	☐ Hazy	☑ Drizzle	☐ Rain	☐ Storm
Temperature	27 °C	**Humidity**	☑ High	☐ Moderate	☐ Low		
Wind	☐ Calm	☐ Light	☑ Breeze	☐ Strong			

GENERAL

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in Engineers' and Contractors' offices for inspection at all sites/offices covered in the permit ?		✓			
EP 1.5	Is a copy of the most up-to-date Environmental Permit displayed at on the construction site at a convenient location for public information?		✓			

WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
EM&A: 5.4	Does the contractor possess valid dumping permits for dredged marine mud and have them available for inspection?		✓			
EM&A: 5.4	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?		✓			
EM&A: 3.2.5	Are wastes disposed of at designated marine dumping sites approved by the Marine Fill Committee of the Civil Engineering Department?		✓			

WATER QUALITY & MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.2 EM&A: A1	Is dredging work prohibited at Working Zone BCs from February to April to protect Finless Porpoise during calving seasons?		✓			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.3 EM&A: A2	Do marine vessels avoid the Finless Porpoise habitat area when moving from and to disposal sites?		✓			
EM&A: A2	Is marine vessel speed subject to a maximum limit of 10 knots in southern Lamma waters?		✓			
EP: 3.4 EM&A: A4	Are grab dredger option and TSHD option prohibited to operate concurrently?		✓			
EP: 3.5 EM&A: C1	Is dredging work carried out in phases in accordance with the latest dredging schedule?		✓			
EP:3.5 EM&A: C2	Does each of the deployed grab dredgers have a grab capacity of no less than $8m^3$?		✓			
EP:3.5 EM&A: C3	Are cage-type silt curtains deployed for grab dredgers?		✓			
EP:3.5 EM&A: C3	Are the silt curtains maintained properly throughout the dredging operation?		✓			
EP: 3.5 EM&A: C4	Is it prohibited to operate more than 5 grab dredgers concurrently at anytime?		✓			
EM&A: D1	Is daily dredging volume spread as evenly as possible over the 24 hour period whenever practical?		✓			
EM&A: D1	Is special care taken during lowering and lifting grabs to minimize unnecessary disturbance to the seabed?		✓			
EM&A: D1	Do vessels have adequate clearance to the seabed?		✓			
EM&A: D1	Are barges fitted with tight fitting seals to their bottom openings to prevent leakage of material during loading and transportation?		✓			
EM&A: D1	Are grabs closed tightly to minimize loss of sediment during dredging		✓			
EM&A: D1	Is the descent speed of hoist controlled suitably low?		✓			
EM&A: D1	Are barges filled to a level, which ensures that materials do not spill over during loading and transportation?		✓			
EM&A: D1	Are large objects removed from the grab to avoid losses from partially closed grabs?	✓				
EM&A: D2	Have the vessel operators been fully briefed on the following: a) Possible presence of dolphins and porpoises in the vicinity of the Study Area and along routes to the Project Area; b) Rules for safe vessel operation around cetaceans; c) Slowing to 10 knots in the presence of cetaceans within the area marked on Figure B3 (Annex B of EM&A Manual); and d) The dumping of chemicals, rubbish, oils etc into the waters is strictly prohibited and enforced.		✓			

NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
NCO	Are valid construction noise permits, if required, available for inspection?		✓			
EM&A: A3	Is the number of dredgers and operation conditions strictly followed as specified in the CNP.		✓			
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?		✓			

Abbreviation

EP:	Environmental Permit (Environmental Permit No. EP-165/2003)
EM&A:	EM&A Manual (Construction Phase)
NCO:	Noise Control Ordinance
Unk:	Unknown

Remark

All dredgers, tug boats & hopper barges are being progressively mobilized from typhoon shelter to Lamma after typhoon.

Signatures

ET Member	Contractor's Representative
(Name in Block letters: STANLEY CHAN)	(Name in Block letters: CHEUNG KWONG KUEN)

The Hongkong Electric Co. Ltd.
Lamma Power Station Navigation Channel Improvement Project
Weekly Site Inspection Checklist

Inspection date: 30/7/03 Time: 15:00 Inspected By: ET: Kelvin Chan / Contractor: K. K. Cheung

Site: LPS - Navigation Channel Improvement

Weather

Condition	☐ Sunny	☑ Fine	☐ Overcast	☐ Hazy	☐ Drizzle	☐ Rain	☐ Storm	
Temperature	30 °C	**Humidity**	☐ High	☑ Moderate	☐ Low			
Wind	☐ Calm	☑ Light	☐ Breeze	☐ Strong				

GENERAL

Ref.	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP 1.3	Is a copy of Environmental Permit together with all documents referred to in the permit kept in Engineers' and Contractors' offices for inspection at all sites/offices covered in the permit ?		✓			
EP 1.5	Is a copy of the most up-to-date Environmental Permit displayed at on the construction site at a convenient location for public information?		✓			

WASTE MANAGEMENT

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
	Dredged Materials					
EM&A: 5.4	Does the contractor possess valid dumping permits for dredged marine mud and have them available for inspection?		✓			
EM&A: 5.4	Has the contractor kept a complete set of dumping records/ticketing system and made them available for inspection?		✓			
EM&A: 3.2.5	Are wastes disposed of at designated marine dumping sites approved by the Marine Fill Committee of the Civil Engineering Department?		✓			

WATER QUALITY & MARINE ECOLOGY

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.2 EM&A: A1	Is dredging work prohibited at Working Zone BCs from February to April to protect Finless Porpoise during calving seasons?		✓			

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
EP: 3.3 EM&A: A2	Do marine vessels avoid the Finless Porpoise habitat area when moving from and to disposal sites?		✓			
EM&A: A2	Is marine vessel speed subject to a maximum limit of 10 knots in southern Lamma waters?		✓			
EP: 3.4 EM&A: A4	Are grab dredger option and TSHD option prohibited to operate concurrently?		✓			
EP: 3.5 EM&A: C1	Is dredging work carried out in phases in accordance with the latest dredging schedule?		✓			
EP:3.5 EM&A: C2	Does each of the deployed grab dredgers have a grab capacity of no less than $8m^3$?		✓			
EP:3.5 EM&A: C3	Are cage-type silt curtains deployed for grab dredgers?		✓			
EP:3.5 EM&A: C3	Are the silt curtains maintained properly throughout the dredging operation?		✓			
EP: 3.5 EM&A: C4	Is it prohibited to operate more than 5 grab dredgers concurrently at anytime?		✓			
EM&A: D1	Is daily dredging volume spread as evenly as possible over the 24 hour period whenever practical?		✓			
EM&A: D1	Is special care taken during lowering and lifting grabs to minimize unnecessary disturbance to the seabed?		✓			
EM&A: D1	Do vessels have adequate clearance to the seabed?		✓			
EM&A: D1	Are barges fitted with tight fitting seals to their bottom openings to prevent leakage of material during loading and transportation?		✓			
EM&A: D1	Are grabs closed tightly to minimize loss of sediment during dredging		✓			
EM&A: D1	Is the descent speed of hoist controlled suitably low?		✓			
EM&A: D1	Are barges filled to a level, which ensures that materials do not spill over during loading and transportation?		✓			
EM&A: D1	Are large objects removed from the grab to avoid losses from partially closed grabs?	✓				
EM&A: D2	Have the vessel operators been fully briefed on the following: a) Possible presence of dolphins and porpoises in the vicinity of the Study Area and along routes to the Project Area; b) Rules for safe vessel operation around cetaceans; c) Slowing to 10 knots in the presence of cetaceans within the area marked on Figure B3 (Annex B of EM&A Manual); and d) The dumping of chemicals, rubbish, oils etc into the waters is strictly prohibited and enforced.		✓			

NOISE

Ref	Checklist Condition	N/A	Yes	No	Unk	Remarks
NCO	Are valid construction noise permits, if required, available for inspection?		✓			
EM&A: A3	Is the number of dredgers and operation conditions strictly followed as specified in the CNP.		✓			
NCO	Are conditions of construction noise permits, if any, for the relevant part(s) of the works implemented accordingly?		✓			

Abbreviation

EP: Environmental Permit (Environmental Permit No. EP-165/2003)
EM&A: EM&A Manual (Construction Phase)
NCO: Noise Control Ordinance
Unk: Unknown

Remark

NIL

Signatures

ET Member

(Name in Block letters:
Kelvin Chan)

Contractor's Representative

(Name in Block letters:
CHEUNG Kwong Kuen

Appendix I: Summary of EMIS

Mitigation Measures and their Implementation

EM&A Log Ref.	Mitigation Measures	Implementation Status
	MITIGATION MEASURES FOR BOTH GRAB DREDGER AND TSHD OPTIONS	
A1	No dredging should be carried out at Working Zone BCs from February to April.	C
A2	Vessel route between the dredging site and the disposal sites should avoid the Finless Porpoise habitat area and be subject to a maximum speed limit of 10 knots in southern Lamma waters as indicated in Figure B3 (Annex B of EM&A Manual).	C
A3	The number of dredgers and operation conditions specified in the applicable CNPs should be strictly followed. In applying for the CNPs, it should be ensured that the number of dredgers and operation conditions are compatible with the recommendations of this EIA.	C
A4	The grab dredger option and TSHD option should not be operated concurrently.	C
	MITIGATION MEASURES FOR TSHD OPTION ONLY	
B1	Dredging works should be carried out in phases in accordance with the programme, number of dredgers and maximum dredging rates specified in Table B4 (Annex B of EM&A Manual).	C
B2	There should not be more than one TSHD operating concurrently at any time.	N/A
	MITIGATION MEASURES FOR GRAB DREDGER OPTION ONLY	
C1	Dredging works should be carried out in phases in accordance with the programme, number of dredgers and maximum dredging rates specified in the latest dredging schedule.	C
C2	Each grab dredger to be deployed should have a grab capacity of no less than 8 m^3.	C
C3	Cage-type silt curtains as illustrated in Figure B1 (Annex B of EM&A Manual) should be deployed for grab dredgers. The silt curtains should be properly maintained during the dredging period.	C
C4	There should be no more than 5 grab dredgers operating concurrently at any time.	C
	GOOD SITE PRACTICE	
D1	Daily dredging volume should be spread as evenly as possible over the 24 hour period whenever practical. Special care should be taken during lowering and lifting grabs to minimize unnecessary disturbance to the seabed.	C
	Vessels used should have adequate clearance of the seabed.	C
	Barges should be fitted with tight fitting seals to their bottom openings to prevent leakage of material.	C
	Grabs should be tightly closed and hoist speed is suitably low.	C
	Barges should not be filled to a level which will cause overflow of materials during loading and transportation.	C

EM&A Log Ref.	Mitigation Measures	Implementation Status
D2	The vessel operators should be fully briefed on the following: • Possible presence of dolphins and porpoises in the vicinity of the Study Area and along routes to the Project Area; • Rules for safe vessel operation around cetaceans; • Slowing to 10 knots in the presence of cetaceans within the area marked on Figure B3 (Annex B of EM&A Manual); and • The dumping of chemicals, rubbish, oils etc into the waters	C

Remarks:

C - Compliance with mitigation measure
NC - Non-compliance with mitigation measure
N/A - Not Applicable

Appendix J

Tentative Construction Programme

HEC Contract no. 02/8011
Lamma Power Station
Navigation Channel Improvement

ID	Task Name	Duration	Start	Finish
1				
2				
3	Dredging Work	166 days	Wed 18/6/03	Sun 30/11/03
4	Dredging along navigation channel	166 days	Wed 18/6/03	Sun 30/11/03
5				
6	Miscellaneous Work	90 days	Tue 5/8/03	Fri 3/10/03
7	Recovery of sunken vessel	60 days	Tue 5/8/03	Fri 3/10/03

Project: Three months programme
Date: Tue 5/8/03

Task
Split
Progress
Milestone
Summary
Project Summary
External Tasks
External Milestone
Deadline

THREE MONTHS ROLLING PROGRAMME