

Permanent Aviation Fuel Facility (EP-262/2007/A)

Fourth Quarterly Environmental Monitoring and Audit Report – October 2007 to December 2007

14th January 2008

Environmental Resources Management

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**Permanent Aviation Fuel Facility (EP-262/2007/A)
Fourth Quarterly Environmental Monitoring and Audit Report
October 2007 to December 2007**

14th January 2008

Prepared by: Karen Lui/Craig A Reid

Document Code: 0018105_EM&AR_4th Quarterly_Jan 08_v0.doc

For and on behalf of
Environmental Resources Management
Approved by: Craig A Reid
Signed: 
Position: Environmental Team Leader
Date: 14th January 2008

Permanent Aviation Fuel Facility for Hong Kong International Airport

Environmental Certification Sheet EP-262/2007/A

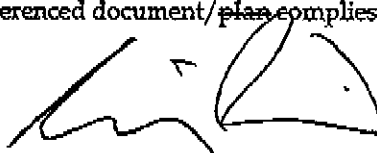
Reference Document/Plan

Document/Plan to be Certified/ Verified:	Fourth Quarterly EM&A Report July 2007 to September 2007
Date of Report:	14 th January 2008
Date received by ET:	14 th January 2008
Date received by IEC:	14 th January 2008


Reference EM&A Manual Recommendation

EM&A Manual Recommendation:	Sections 13.5 and 13.5.3
Content:	EM&A Reports
13.5 A maximum of 4 copies of each EM&A Report shall be submitted	
13.5.3 The ET Leader will submit Quarterly EM&A Summary Reports for the construction phase EM&A works only.	

ET Certification

I hereby certify that the above referenced document/ plan complies with the above referenced sections of the EM&A Manual recommendation	
Craig A Reid, Environmental Team Leader:	 Date: 14 th January 2008

IEC Verification

I hereby verify that the above referenced document/ plan complies with the above referenced sections of the EM&A Manual recommendation	
Dr Guiyi Li, Independent Environmental Checker:	 Date: 16 Jan 2008

Notes: EP-262/2007/A has replaced the former EP-262/2007 and EP-139-2002/A for the PAFF project after the resubmission of revised EM&A Manual and revised EIA Report respectively.

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EXECUTIVE SUMMARY

The construction works for the Permanent Aviation Fuel Facility resumed on 9th July 2007. This **fourth** quarterly Environmental Monitoring and Audit (EM&A) report presents the EM&A works carried out during the period from **1st October to 31st December 2007** in accordance with the EM&A Manual.

Breaches of all Action and Limit Levels

Daily exceedance of Action Levels of Turbidity and occasional exceedance of Action Limit Levels of Suspended Solids were found on 21st, 24th, 25th, 27th, 29th and 30th December 2007. Following review of data in accordance with the procedures specified in the EM&A Manual, these exceedances were considered due to natural fluctuation from the Pearl River discharge rather than the Project Works.

Complaint Log

No environmental complaint was received during the reporting period.

Notifications of any Summons and Successful Prosecutions

No environmental summon or prosecutions was received in this reporting period.

Reporting Changes

There were no reporting changes in the reporting period.

Future Key Issues

- Dust release and suppression;
- Dredging activities; and
- Water quality monitoring and dolphin monitoring during the dredging activities.

Leighton Contractors (Asia) Limited (LCAL) has appointed ERM-Hong Kong, Limited (ERM) as the Environmental Team (ET) to implement the Environmental Monitoring and Audit (EM&A) programme for the Permanent Aviation Fuel Facility (the Project) during construction works.

The construction works for PAFF commenced in November 2005 based upon the previous EIA (EIAO Register Number AEIAR-062-2002) conducted and the Environmental Permit EP-139/2002 granted on the 28th August 2002. Due to minor changes to the detailed layout of the site and the site boundary, application for Variation to the Environmental Permit (VEP) (VEP-133/2004) was submitted to the Director of Environmental Protection (DEP) for approval. The variation to the EP (EP-139/2002/A) was granted by EPD in February 2004.

However, the decision by EPD to grant the above Environmental Permit was subject to a Judicial Review. The Judicial Review sided in the favour of the DEP, as did the subsequent Judgement from the Court of Appeal from the High Court for Judicial Review in March 2005. However, the DEP's decision to grant the EP was quashed by the Judgement of the Court of Final Appeal of July 2006.

The construction works were stopped following the Judgement of the Court of Final Appeal of July 2006. As such, in order to continue with the construction of the project, the project went through the statutory procedures under the EIAO again with a new design in order to obtain an environmental permit. The revised EIA was submitted in 2007 and the environmental permit (EP-262/2007) was granted in May 2007. EP-262/2007 has been amended to EP262/2007/A and issued by the EPD on 30 November 2007

The construction works and EM&A requirements resumed on 9th July 2007 following the latest requirements of the EP-262/2007 and EM&A Manual. Details regarding the EM&A requirements and changes should refer to the updated EM&A Manual. For the marine works, all piling activities were completed before the previous suspension of construction works in 2006.

1.1

PURPOSE OF THE REPORT

This is the **fourth** EM&A Report which summarizes the monitoring results and audit findings for the EM&A programme during the reporting period from **1st October** to **31st December 2007**.

1.2 KEY CONTACT INFORMATION

Key contact information of the Project is presented in *Table 1.1*.

Table 1.1 *Contact Information*

Name	Position	Telephone	Facsimile	E-mail
Airport Authority Hong Kong - Environmental Permit Holder				
Mr Amin Ebrahim	Assistant General Manager Aviation Logistics	2183 3108	2824 2786	ebraa@hkairport.com
Contractor - Leighton (Asia) Construction Limited				
Brian Gillon	Project Director	2823 1111	2529 8784	brian.gillon@leightonasia.com
Franchisee's Site Representative - ECO Aviation Fuel Development Limited				
Philip Siu	Franchisee's Site Representative	2963 2820	2563 6311	philip.siu@towngas.com
Environmental Team - ERM-Hong Kong Limited				
Craig Reid	Environmental Team Leader	2271 3000	2723 5660	craig.reid@erm.com
Independent Environmental Checker - Hyder Consulting Limited				
Dr Guiyi Li	Independent Environmental Checker	2911 2233	2805 5028	guiyi.li@hyder.com.hk

2 ENVIRONMENTAL STATUS

2.1 PROJECT AREA

The project area is in Area 38 of Tuen Mun and the pipelines are located in Urmston Road between Tuen Mun Area 38 and Sha Chau. The site is illustrated in *Annex A*.

2.2 ENVIRONMENTAL SENSITIVE RECEIVERS

No air and noise sensitive receivers were identified close to the project area. However, water sensitive receivers and ecological sensitive receivers were identified in the EIA study, and are shown in *Annex B*.

2.3 MAJOR CONSTRUCTION ACTIVITIES

A summary of the major works undertaken in this reporting period is shown in *Table 2.1*.

Table 2.1 Summary of Works Undertaken During the Reporting Period

Area	Works undertaken
Tuen Mun Area 38	Tank Farm and Bund Wall Construction Permanent Drainage Construction Operational & Fire Services Buildings Construction Minor Jetty Works (Non-piling) Site Investigation
Submarine Pipeline Route	Dredging Operations

2.4 MONITORING SCHEDULE OF THE REPORTING PERIOD

Daily water quality monitoring during dredging activities was commenced on 17 December 2007. The monitoring schedule for December 2007 and January 2008 is presented in *Annex C*.

2.5 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

A summary of the relevant permits, licences, and/or notifications on environmental protection for this Project since July 2007 is presented in *Table 2.2*.

Table 2.2 Summary of Environmental Licensing, Notification and Permit Status

Permit/ Licenses/ Notification	Reference	Validity Period	Remarks
Environmental Permit	<i>EP-262/2007/A</i>	Throughout Project	Issued on 30 November 2007 (<i>EP-262/2007</i> issued on 31 May 2007, <i>EP-139/2002</i> originally granted on 28 August 2002 and <i>EP-139/2002/A</i> granted on 24 February 2004 were superseded)
Chemical Waste Producer Registration	<i>WPN 5111-421-L2174-25</i>	Throughout Project	Issued on 10 November 2005
Notification of Construction Works under Air Pollution Control (Construction Dust) Regulation	<i>H2104/U1D/5542/DG/DH/PL</i>	Throughout Project	Notification on 6 July 2007
Construction Noise Permit	<i>GW-RW0676-07</i>	21 December 2007 to 19 June 2008	For land-based works including air compressors, breakers, excavators, wheeled loaders, mobile cranes, concrete lorry mixers, hand-held pokers, bar benders/cutters, wood saws, grinders, submarine water pump, lorries with crane, dump trucks, rollers, ventilation fans and generators
	<i>GW-RW0677-07</i>	21 December 2007 to 29 February 2008	For marine dredging operation including grab dredger, tug boat, split hopper barge and motor sampan
	<i>GW-RW0678-07</i>	21 December 2007 to 18 June 2008	For marine jetty works including concrete pump derrick barges, hand-held grinders, generators, air compressors, boring machines, water pumps, tug boat, grout mixers and grout pumps
Marine Dumping Permit	<i>EP/MD/08-064</i>	13 December 2007 to 29 February 2008	For Type 1 marine disposal
	<i>EP/MD/08-065</i>	13 December 2007 to 12 January 2008	For Type 1d & Type 2 marine disposal
	<i>EP/MD/08-071</i>	13 January 2008 to 12 February 2008	For Type 1d & Type 2 marine disposal
Wastewater Discharge License	<i>EP760/421/011399/1</i>	15 March 2006 to 31 March 2011	Issued on 15 March 2006

2.6

COMMUNITY LIAISON GROUP MEETING

According to the EP requirements, a Community Liaison Group (CLG) shall be established within three months after commencement of construction of the Project. The major duty of CLG is to advise on and monitor the proper design, construction and operation of the Project. The CLG comprises representatives from Airport Authority, members of Tuen Mun community and academics. During the reporting period, the CLG held a meeting cum site visit on 5 October and 7 December 2007.

The details of PAFF CLG (including Membership and its Terms of Reference) and the meeting minutes can be found on the Project website (<http://www.paffhk.com>).

2.7

SUMMARY OF NON-COMPLIANCE WITH THE ENVIRONMENTAL QUALITY PERFORMANCE LIMITS

Summary of Environmental Non-compliance

Water quality monitoring during dredging activities recorded daily exceedance of Action Levels of Depth-averaged Turbidity. There was exceedance of the Action Levels of Depth-averaged Suspended Solids (SS) on the 21, 24, 25, 27, 29 and 30 December, and exceedance of the SS Limit Levels on the 27, 29 and 30 December. A description of the actions taken following these non-compliances is discussed in *Section 3.2*.

Summary of Environmental Complaints

No environmental complaint was received during the reporting period. A statistical summary of environmental complaints since project commencement is presented in *Annex D*.

Summary of Environmental Summons

No summons was received in this reporting period. A statistical summary of legal proceeding since project commencement is presented in *Annex D*.

3.1 PREVIOUS ENVIRONMENTAL DEFICIENCIES AND FOLLOW-UP ACTIONS

As no environmental complaint was received over the last reporting period, no follow-up action was required.

Weekly site inspections were carried out by the ET on 5th, 11th, 18th and 26th October 2007, 1st, 8th, 15th, 22nd and 30th November, 5th, 13th, 17th and 28th December 2007. Overall, the site was in good orderly manner and no non-compliance was found. Environmental deficiencies and follow-up actions/mitigation measures were identified during the inspections and summarised in *Table 3.1*.

Table 3.1 *Environmental Deficiencies (Observations) from Site Inspections during Reporting Period*

Reporting Month	Observation	Follow-up Action
October 2007	Excavated materials near Tank 3 were not properly covered with tarpaulin sheets to avoid dust generation.	The sand pile was covered accordingly.
	Ponding of rainwater was observed along the hoarding near the site entrance.	Rainwater was pumped offsite via the temporary drainage system.
	General refuse was observed to be scattering around the smoking area near Tank 6.	General refuse was cleared.
	Disposal of stockpiled construction waste to public fill bank was not undertaken.	Disposal of stockpiled construction was undertaken
November 2007	General refuse was observed to be full outside the site office and operation building.	General refuse was cleared.
	Disposal of stockpiled construction waste to public fill bank was not undertaken.	Disposal of stockpiled construction was undertaken.
	Construction material at the stockpile area was observed to be loaded without spraying with water.	The excavated materials at the stockpiling area were regularly sprayed with water to avoid dust generation.
December 2007	The stockpiles of excavated materials near the site entrance were not covered properly with tarpaulin sheets.	The sand pile was covered accordingly.
	Ponding of rainwater was observed at areas around site entrance.	Rainwater was pumped offsite via the temporary drainage system.

Overall, the site was in a good orderly manner. The ET will keep track on the EM&A programme to ensure compliance of environmental requirements and the proper implementation of all necessary mitigation measures.

3.2

DESCRIPTION OF ACTIONS TAKEN IN EVENT OF NON-COMPLIANCE AND DEFICIENCY REPORTING

Water quality monitoring during dredging activities recorded daily exceedance of Action Levels of Depth-averaged Turbidity. There was exceedance of the Action Levels of Depth-averaged Suspended Solids (SS) on the 21, 24, 25, 27, 29 and 30 December, and exceedance of the SS Limit Levels on the 27, 29 and 30 December. There was both mid-ebb and mid-flood exceedance for SS on the 24, 25 and 30 of December. Details of exceedance were presented in the monitoring results *Annex G*. A description of the actions taken following identification of a non-compliance are discussed in *Section 3*.

Although dredging operations were undertaken during the reporting period, the exceedances were unlikely to be caused by the Project and were considered to be an isolated case due to the following reasons:

- Exceedance of Action Level of depth-averaged Turbidity was found on 17, 21, 22, 31 December (when no dredging was undertaken), whose values were comparable to those of days with dredging operations
- Depth-averaged DO, bottom DO and depth-averaged SS did not show the same trend of exceedance

As per the requirements of the EM&A Manual, incidents were notified to the Franchisee's Site Representative, the Contractor and the Independent Environmental Checker upon identification of an exceedance.

The temporal and spatial trend of the results collected during the impact monitoring have been plotted against those collected during the baseline monitoring and are discussed below. Results are illustrated in *Figure G3* in *Annex G*.

Ebb Tide

During impact monitoring on the ebb tide, turbidity and SS levels at all stations, with the exception of Impact Station MP, are generally comparable with those levels recorded during the baseline monitoring. It is noted that there appears to be an increasing trend in both turbidity and SS levels at Station MP between 22 and 30 December (maximum of 40.2 NTU and 37.2 mg/L respectively), however, as this station was located over 1.5 km upstream from the dredging operation, it is considered unlikely that these levels are attributable to Project works. It is more likely that the waters upstream of the works site are influenced by other factors, such as natural fluctuations of turbidity and SS observed in the Pearl River Estuary.

Flood Tide

During impact monitoring on the flood tide, both turbidity and SS levels at all stations, are generally comparable with those recorded during the baseline monitoring. An exception was noted for 27 December where maximum levels were higher than those recorded during other monitoring events. As levels returned to levels comparable with other monitoring events the following day, such fluctuations are not considered to be of a concern.

It is also important to note that the construction works were not carried out continuously over the weeks during the impact monitoring period. On some occasions, there were no marine works undertaken on site during the monitoring period.

Whilst it is noted that there were no apparent spatial trends in the monitoring data, there does appear to be an overall temporal increase in concentrations of monitoring parameters. As this increase is noted to be generally consistent over all monitoring stations, it is considered that this change is likely to be reflective of natural conditions. Nevertheless, such patterns will be examined over the remaining monitoring period to verify whether the trend continues.

3.2.2 *Follow-up Action following Non-Compliance*

In accordance with the required procedures specified in the EM&A Manual to be taken following the trigger of an Action Level, discussions between the Environmental Team and the Independent Environmental Checker (IEC) have resulted in a recommendation of an amendment to be made to the Action Level for the monitoring of Turbidity for the Project.

3.2.3 *Recommendation following Non-Compliance*

It is noted that for Dissolved Oxygen (DO) and Suspended Solids (SS) a set Action and Limit Levels have been established taking into consideration both the baseline data as well as the Environmental Protection Departments (EPD) routine water quality monitoring data collected between 1998 and 2006. This value thus takes into account historical fluctuations in ambient conditions and thereby could be considered to be more representative of natural change. Presently, monitoring for Turbidity does not take into account natural spatial and temporal patterns, but is rather restricted to Action Levels that are determined by the water quality data collected at upstream control station on the day of monitoring. It is therefore recommended that the Action Level of Turbidity be amended to follow the same principle as that currently applied to DO and SS.

Steps to potentially amend the Action Level of Turbidity are currently in discussion with the IEC and the EPD and will be presented in the revised *Baseline Water Quality Monitoring Report*. The progress of these recommendations will be document in the next *Monthly Monitoring Report*.

3.3

IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS

The implementation status of environmental mitigation measures and requirements as stated in the EIA Report, Environmental Permits and EM&A Manual during the reporting period is summarized in *Annex E*.

4 ENVIRONMENTAL MONITORING

4.1.1 Air and Noise

Air and Noise monitoring was not required for the project.

4.1.2 Water Quality

In accordance to the EM&A Manual, during dredging activities, water quality monitoring commenced on 17 December 2007. QA/QC reports for Suspended Solids testing are presented in *Annex F*. Monitoring data and graphical presentations of the results are included in *Annex G*.

Results of the monitoring demonstrated that all measured dissolved oxygen levels of all Impact Stations were compliant with the Action and Limit (AL) Levels specified in the EM&A Manual. Concentrations of Suspended Solids (SS) were generally below AL Levels, however, exceedances were noted for 21st, 24th, 25th, 27th, 29th and 30th December 2007. Turbidity levels were, however, above Action Levels on a daily basis during the reporting month. A review of the above exceedances concluded that these were not attributable to Project works and were likely due to natural variation (see *Section 3.2* for further details).

At the time of this report, laboratory analysis of POPs was still in progress. Results of POPs monitoring will be presented in the next *Monthly Monitoring Report* once they become available.

4.1.3 Waste Management

The Contractor's revised Waste Management Plan (Revision 4) (WMP) was submitted to EPD on 20th September 2007.

4.1.4 Cultural Heritage

Since dredging activity has not reached the sediment removal of 3km (for SS) and 2km (SS2) level during the reporting period, marine archaeological monitoring was not required.

4.1.5 Landscape and Visual

According to the EIA report and EM&A Manual, mitigation measures and site inspection are required during the landscaping/planting works. The berm/landscaping bund was dominated by vegetation which was grown during the project suspension period. The transplanted trees were in good and healthy conditions.

The weekly site inspections included audits on landscape and visual issues to ensure that the site was in orderly acceptable manner.

4.1.6

Land Contamination, Hazard to Life and Fuel Spill Risk

According to the EIA report and EM&A Manual, mitigation measures and design phase audit are required to minimise the risk of fuel spill and hazards. The Contractor will submit the updated design audit plan according to the EP requirements.

Pursuant to Condition 3.5 of the EP, the Contractor submitted two design drawings entitled Fencing and Security Wall Layout Plan (PAFF/LC/02/DWG/C/0176 Revision A) and Fencing and Security Wall Section (PAFF/LC/02/DWG/C/0177 Revision A) to the ET for certification on 30th July 2007. The ET reviewed the drawings and offered comment on the design of the security walls and bund walls, taking into account of Condition 3.5a of the EP, to the Contractor on 31st August 2007. Response to comment (RTC) from the Contractor was received by the ET on 19th September 2007. A review of the RTC is now in progress.

Weekly site inspection covered the waste management aspects which included measures to prevent land contamination by chemical wastes.

4.1.7

Ecology

Dolphin Visual Monitoring

In accordance to EM&A Manual, dolphin monitoring has been undertaken during dredging activities since 17 December 2007.

During the reporting period, two dolphin sightings were recorded outside the exclusion zone on 25 December and 28 December, with only one dolphin sighting recorded within the exclusion zone on 21 December. Appropriate action was taken in accordance with the EM&A Manual. The sighting results were presented in *Table 4.1*.

Table 4.1

Dolphin Sighting Records during the Reporting Period

Date	Time	Sighting Distance from Dredger (m)	Group Size	Beaufort	Boat Association	Observer's Name
21/12/2007	14:55	90	3	1	None	Richard Huang
25/12/2007	14:00	600	3	1	None	Richard Huang
28/12/2007	09:28	620	1	1	Shrimp trawler	Anton Tsang

4.1.8

EM&A Manual

The *EM&A Manual* for the Project has been updated by the ET to include the detailed arrangements of setting up a Community Liaison Group, carrying out design audit, and monitoring of Persistent Organic Pollutants during construction of the Project. The updated EM&A Manual was revised accordingly to the comments received from the EPD on 6th December 2007 and

was submitted to the EPD on 10th December 2007. The ET will keep track on comments received from the EPD, if any, and update the *EM&A Manual* accordingly.

4.1.9 *Baseline Water Quality Monitoring*

Baseline water quality monitoring was conducted between 24 October and 30 October 2007 at six designated monitoring stations (three impact stations and three control stations) established for the Project in accordance with the *EM&A Manual*. The *Final Baseline Monitoring Report* was submitted to the EPD on 21 November and comments were received from the EPD on 6th December. A revised *Final Baseline Monitoring Report* will be submitted to the EPD within the next reporting period.

5 *FUTURE KEY ISSUES AND CONCLUSION*

5.1 *KEY ISSUES FOR THE NEXT REPORTING PERIOD*

Key issues to be considered in the next report period will include:

- Dust release and suppression;
- Operation of dredging activities; and
- Water quality monitoring and dolphin monitoring during the dredging activities.

5.2 *IMPACT PREDICTION FOR THE NEXT REPORTING PERIOD*

Provided that environmental mitigation measures including good on-site practises are properly implemented, it is not expected that unacceptable adverse impact will arise.

Based on the water quality monitoring results recorded to date, it may be expected that further exceedances in Turbidity and possibly Suspended Solids may be recorded. However, as with those recorded so far, it is not expected that such exceedances would be attributable to Project Works. It is noted that actions are underway to potentially revised the Action Limit Levels for Turbidity and progress on these revisions will be summarised in the next *Monthly Monitoring Report*.

5.3 *WORKS AND MONITORING SCHEDULE FOR THE NEXT REPORTING PERIOD*

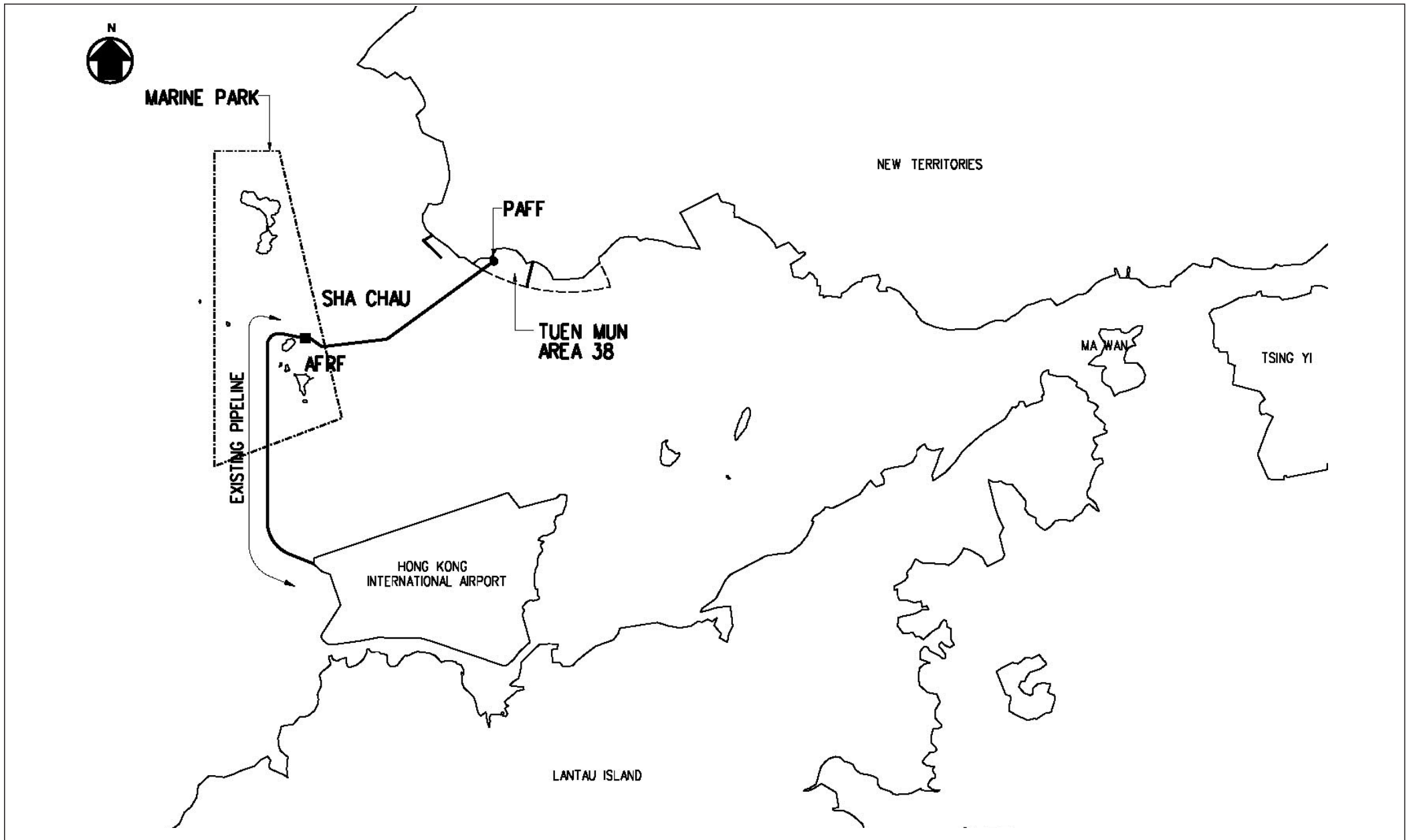
Work programme for the next reporting period includes jetty platform works (non-piling), site works (construction works for tank farm, operational and fire services buildings, drainages, bund wall, security wall etc) and dredging operation. Weekly site inspections will be undertaken. Water quality, dolphin monitoring and marine archaeological monitoring will be undertaken in accordance with the *EM&A Manual*.

5.4 *CONCLUSION*

The EM&A works were conducted throughout the construction period and the relevant monitoring was conducted in accordance with the EP's requirements. Mitigation measures were used to minimise the environmental impacts, where appropriate. Some environmental deficiencies were observed during the site inspections and the Contractor implemented corrective action to mitigate the issues. Overall, the site was in an orderly manner.

Annex A

Project Location



Annex A

Location of PAFF

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DATE: 12/11/2007






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Annex B

Water Quality Monitoring
Stations, Water Quality and
Ecological Sensitive
Receivers

KEY

-  Control Stations
-  Impact Stations
-  Marine Park
-  Proposed Pipeline
-  Potential IMO1 & IMO2 Monitoring Zone

Marine Park
(Water Sensitive Receiver)

C2 (NM5)

C1 (NM3)

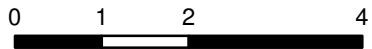
MPB1

MPB2

C3 (NM6)



Kilometers



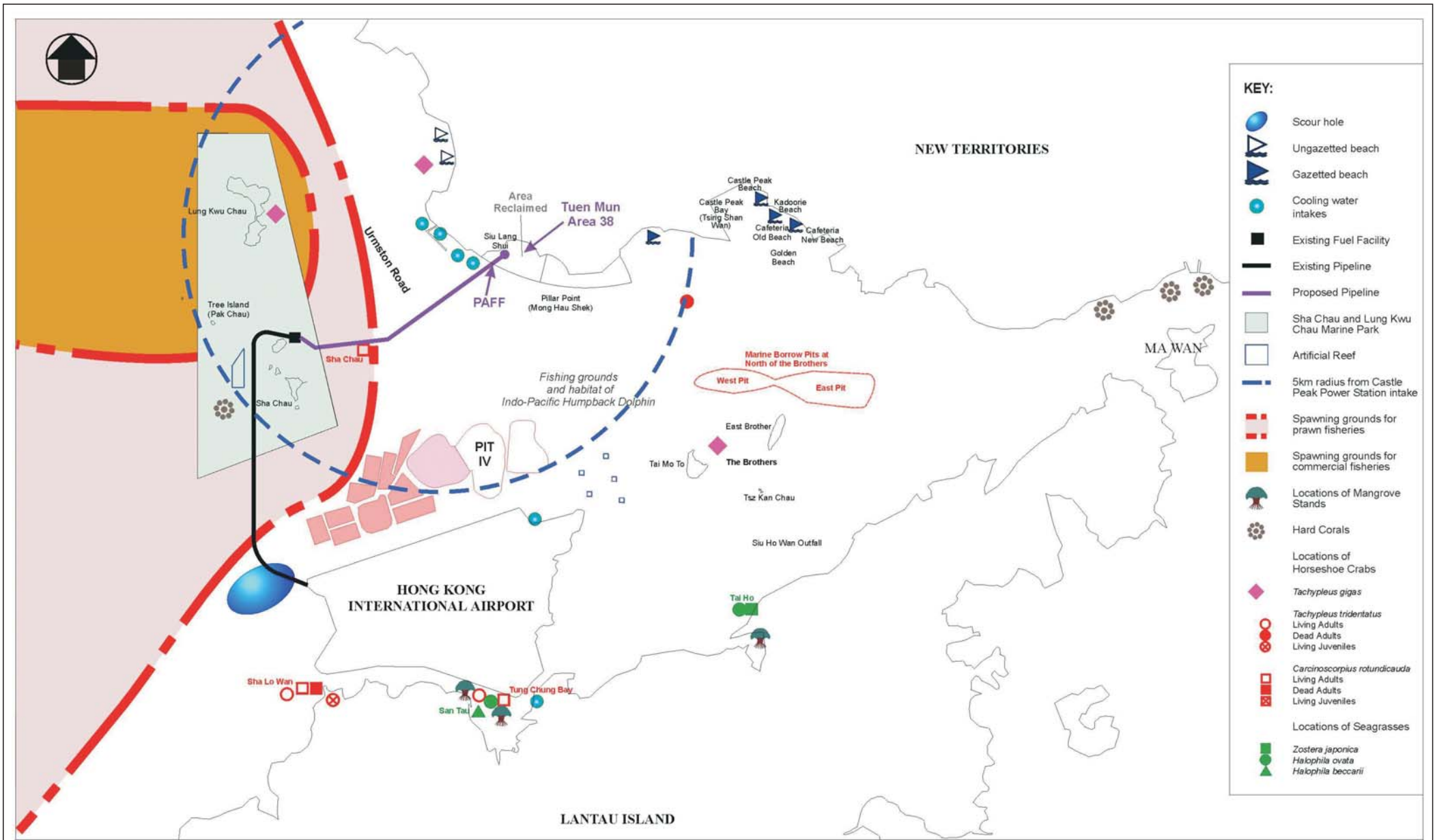
Annex B

Water Sensitive Receiver and Water Quality Monitoring Locations

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Annex B

Water Quality and Ecological Sensitive Receivers

FILE: C2475aa
DATE: 12/11/2007

(Source : PAFF for Hong Kong International Airport EIA, Mouchel 2002)

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Annex C

Monitoring Schedule for the Reporting Period and Next Month

**Permanent Aviation Fuel Facility
Tentative Water Quality Monitoring Schedule - December 2007**

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						01-Dec
02-Dec	03-Dec	04-Dec	05-Dec	06-Dec	07-Dec	08-Dec
09-Dec	10-Dec	11-Dec	12-Dec	13-Dec	14-Dec	15-Dec
16-Dec	17-Dec	18-Dec	19-Dec	20-Dec	21-Dec	22-Dec
	Mid-flood 13:12 Mid-ebb 19:12	Mid-flood 13:52 Mid-ebb 20:20	Mid-ebb 07:47 Mid-flood 14:29	Mid-ebb 09:01 Mid-flood 15:07	Mid-ebb 10:11 Mid-flood 15:47	Mid-ebb 11:19 Mid-flood 16:29
23-Dec	24-Dec	25-Dec	26-Dec	27-Dec	28-Dec	29-Dec
Mid-ebb 12:14 Mid-flood 17:15	Mid-ebb 13:03 Mid-flood 18:01	Mid-ebb 13:50 Mid-flood 18:48	Mid-ebb 14:34 Mid-flood 19:36 +POP Samples	Mid-ebb 15:19 Mid-flood 20:22	Mid-ebb 16:04 Mid-flood 21:08	Mid-flood 11:34 Mid-ebb 16:52
30-Dec	31-Dec					
Mid-flood 12:14 Mid-ebb 17:48	Mid-ebb 05:29 Mid-flood 12:51					

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

**Permanent Aviation Fuel Facility
Tentative Water Quality Monitoring Schedule - January 2008**

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		01-Jan	02-Jan	03-Jan	04-Jan	05-Jan
		Mid-Ebb 06:06 Mid-Flood 13:25	Mid-Ebb 07:14 Mid-Flood 13:54	Mid-Ebb 08:59 Mid-Flood 14:24	Mid-Ebb 10:19 Mid-Flood 14:59	Mid-Ebb 11:06 Mid-Flood 15:42
06-Jan	07-Jan	08-Jan	09-Jan	10-Jan	11-Jan	12-Jan
Mid-Ebb 11:47 Mid-Flood 16:27	Mid-Ebb 12:26 Mid-Flood 17:12	Mid-Flood 08:13 Mid-Ebb 13:04	Mid-Flood 08:44 Mid-Ebb 13:43 +POP Samples	Mid-Flood 09:14 Mid-Ebb 14:20	Mid-Flood 09:44 Mid-Ebb 14:59	Mid-Flood 10:13 Mid-Ebb 15:38
13-Jan	14-Jan	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
Mid-Flood 10:43 Mid-Ebb 16:21	Mid-Flood 11:14 Mid-Ebb 17:09	Mid-Flood 11:49 Mid-Ebb 18:13	Mid-Flood 12:25 Mid-Ebb 19:23	Mid-Ebb 06:55 Mid-Flood 13:06	Mid-Ebb 08:24 Mid-Flood 13:50	Mid-Ebb 09:59 Mid-Flood 14:43
20-Jan	21-Jan	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan
Mid-Ebb 11:12 Mid-Flood 15:56	Mid-Ebb 12:11 Mid-Flood 17:04	Mid-Ebb 12:58 Mid-Flood 18:02	Mid-Flood 08:30 Mid-Ebb 13:40 +POP Samples	Mid-Flood 09:04 Mid-Ebb 14:19	Mid-Flood 09:34 Mid-Ebb 14:55	Mid-Flood 10:01 Mid-Ebb 15:30
27-Jan	28-Jan	29-Jan	30-Jan	31-Jan		
Mid-Flood 10:23 Mid-Ebb 16:04	Mid-Flood 10:45 Mid-Ebb 16:42	Mid-Flood 11:08 Mid-Ebb 17:31	Mid-Flood 11:35 Mid-Ebb 18:47	Mid-Ebb 05:35 Mid-Flood 11:55		

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

Annex D

Cumulative Complaints Statistics

Summary of Environmental Complaints

Reporting Period	Complaint Statistics		
	Frequency	Cumulative	Complaint Nature
Before construction works	1	1	Dust
18/11/05 - 15/12/05	1	2	Dust
15/12/05 - 14/01/06	0	2	Nil
15/01/06 - 14/02/06	0	2	Nil
15/02/06 - 14/03/06	0	2	Nil
15/03/06 - 14/04/06	0	2	Nil
15/04/06 - 14/05/06	0	2	Nil
15/05/06 - 14/06/06	0	2	Nil
15/06/06 - 14/07/06	0	2	Nil
Re-commencement of construction works on 9 th July 2007			
09/07/07 - 31/07/07	0	2	Nil
01/08/07 - 31/08/07	0	2	Nil
01/09/07 - 30/09/07	0	2	Nil
01/10/07 - 31/10/07	0	2	Nil
01/11/07 - 30/11/07	0	2	Nil
01/12/07 - 31/12/07	0	2	Nil

Summary of Environmental Summons

Reporting Period	Environmental Summons		
	Frequency	Cumulative	Summon Nature
18/11/05 - 15/12/05	0	0	Nil
16/12/05 - 14/01/06	0	0	Nil
15/01/06 - 14/02/06	0	0	Nil
15/02/06 - 14/03/06	0	0	Nil
15/03/06 - 14/04/06	0	0	Nil
15/04/06 - 14/05/06	0	0	Nil
15/05/06 - 14/06/06	0	0	Nil
15/06/06 - 14/07/06	0	0	Nil
Re-commencement of construction works on 9 th July 2007			
09/07/07 - 31/07/07	0	0	Nil
01/08/07 - 31/08/07	0	0	Nil
01/09/07 - 30/09/07	0	0	Nil
01/10/07 - 31/10/07	0	0	Nil
01/11/07 - 30/11/07	0	0	Nil
01/12/07 - 31/12/07	0	0	Nil

Annex E

Implementation Schedule

ANNEX E IMPLEMENTATION SCHEDULE

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
Water Quality										
6.7	6.8.1	There should be no access to the shore or working from land within the Marine Park. No marine anchors shall be used within the Marine Park.	Marine Park / Pipeline Dredging	Contractor	TMEIA	Y			N/A	Pending
6.7	6.8.1	No hydraulic dredging within Marine Park.	Marine Park / Pipeline Dredging	Contractor	TMEIA	Y			N/A	Pending
6.7	6.8.1	Dredging for pipeline trench should be timed to coincide with maintenance dredging for Sha Chau AFRF marine access channel if relevant.	Sha Chau ARFR Marine access channel	Airport Authority	TMEIA	Y			N/A	Pending
6.4		The work rate for dredging should not exceed 4,000 m ³ /hr for the TSHD and 7,000 m ³ /day for the grab dredger.	Marine Park / Pipeline Dredging	Contractor	TMEIA	Y			N/A	Pending
6.7	6.8.1	Standard good dredging practice measures shall be written in the dredging contract.	Marine Park / Pipeline Dredging	Franchisee	TMEIA	Y			N/A	Pending
6.7	6.8.1	Use of Lean Material Overboard (LMOB) systems shall be prohibited. No mud overflow is to be permitted for dredging using TSHD.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending
6.7	6.8.1	Mechanical grabs shall be designed and maintained to avoid spillage and should seal tightly while being lifted.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.7	6.8.1	Barges and hopper dredgers shall have tight fittings seals to their bottom openings to prevent leakage of material.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending
6.7	6.8.1	Any pipe leakages shall be repaired quickly. Plant should not be operated with leaking pipes	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending
6.7	6.8.1	Loading of barges and hoppers shall be controlled to prevent splashing of dredged material to the surrounding water. Barges or hoppers shall not be filled to a level which will cause overflow of materials or pollution of water during loading or transportation.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending
6.7	6.8.1	Excess material shall be cleaned from the decks and exposed fittings of barges and hopper dredgers before the vessel is moved.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending
6.7	6.8.1	Adequate freeboard shall be maintained on barges to reduce the likelihood of decks being washed by wave action.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending
6.7	6.8.1	All vessels shall be sized such that adequate clearance is maintained between vessels and the sea bed at all states of the tide to ensure that undue turbidity is not generated by turbulence from vessel movement or propeller wash.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions	Y			N/A	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.7	6.8.1	The works shall not cause foam, oil, grease, letter or other objectionable matter to be present in the water within and adjacent to the works site.	Dredged areas/ Pipeline Dredging	Contractor	TMEIA Marine Fill Committee Guidelines. DASO permit conditions		Y		N/A	Ongoing
6.7	6.8.1	Placement of pipeline trench backfill should be undertaken in a controlled manner to minimise impacts. Backfilling with rock should be undertaken either down pipe or by a reverse grab operation or other controlled technique to ensure that this material does not mound on the seabed	Pipeline trench/ Pipeline Dredging	Contractor	TMEIA Minimise disturbance		Y		N/A	Pending
6.7	6.8.1	Wastewater from temporary site facilities should be controlled to prevent direct discharge to surface or marine waters.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Sewage effluent and discharges from on-site kitchen facilities shall be directed to Government sewer in accordance with the requirements of the WPCO or collected for disposal offsite. The use of soakaways shall be avoided.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Storm drainage should be directed to storm drains via adequately designed sand/silt removal facilities such as sand traps, silt traps and sediment basins. Channels, earth bunds or sandbag barriers should be provided on site to properly direct stormwater to such silt removal facilities. Catchpits and perimeter channels should be constructed in advance of site formation works and earthworks.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.7	6.8.1	Silt removal facilities, channels and manholes shall be maintained and any deposited silt and grit shall be removed regularly, including specifically at the onset of and after each rainstorm.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Temporary access roads should be surfaced with crushed stone or gravel.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Rainwater pumped out from trenches or foundation excavations should be discharged into storm drains via silt removal facilities.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Measures should be taken to prevent the washout of construction materials, soil, silt or debris into any drainage system.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Open stockpiles of construction materials (e.g. aggregates and sand) on site should be covered with tarpaulin or similar fabric during rainstorms.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Manholes (including any newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into foul sewers.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.7	6.8.1	Discharges of surface run-off into foul sewers must always be prevented in order not to unduly overload the foul sewerage system.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	All vehicles and plant should be cleaned before they leave the construction site to ensure that no earth, mud or debris is deposited by them on roads. A wheel washing bay should be provided at every site exit.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Wheel wash overflow shall be directed to silt removal facilities before being discharged to the storm drain.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	The section of construction road between the wheel washing bay and the public road should be surfaced with crushed stone or coarse gravel.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Wastewater generated from concreting, plastering, internal decoration, cleaning work and other similar activities, shall be screened to remove large objects.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Vehicle and plant servicing areas, vehicle wash bays and lubrication facilities shall be located under roofed areas. The drainage in these covered areas shall be connected to foul sewers via a petrol interceptor in accordance with the requirements of the WPCO or collected for off site disposal.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.7	6.8.1	The contractors shall prepare oil/chemical cleanup plan and ensure that leakages or spillages are contained and cleaned up immediately.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Waste oil should be collected and stored for recycling or disposal, in accordance with the Waste Disposal Ordinance.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	All fuel tanks and chemical storage areas should be provided with locks and be sited on sealed areas. The storage areas should be surrounded by bunds with a capacity equal to 110% of the storage capacity of the largest tank.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Surface run-off from bunded areas should pass through oil/grease traps prior to discharge to the stormwater system.	Land site/ Throughout construction period	Contractor	TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	6.8.1	Wastewater from pipe commissioning dewatering exercises shall be stored on site and for chemical analysis and safe disposal in accordance with the WPCO.	Tank Farm/Tank farm commissioning	Franchisee	TMEIA WPCO TM on Effluent Standards		Y		N/A	Ongoing
6.7	Section 6	All construction works shall be subject to routine audit to ensure implementation of all EIA recommendations and good working practice.	Land site/ Throughout construction period	Contractor	EM&A Manual		Y		N/A	Ongoing
6.7	Section 6	Submarine section of aviation fuel pipeline shall be covered with rock armour protection which shall not protrude above the level of the adjacent natural seabed.	Submarine pipeline	Franchisee	TMEIA Rock armour to minimum thickness of 1m	Y	Y		Franchisee	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.7	Section 6	Detailed emergency response procedures shall be drawn up. These will include requirements to maintain floating oil booms, absorbent materials and skimmers on site at all times.	All facilities	Franchisee	TMEIA Industry Standards e.g. Oil Companies International Marine Forum			Y	Franchisee	Pending
6.7	Section 6	Coupling points on the jetty will be protected with slop collection utilities.	Jetty	Franchisee	TMEIA Rock armour to minimum thickness of 1m			Y	Franchisee	Pending
6.7	Section 6	Auxiliary tanks shall be permanently maintained at the tank farm for recovered fuel and slops.	Tank farm	Franchisee	TMEIA			Y	Franchisee	Pending
6.7	Section 6	Oily drainage systems and slop collection systems will connect to an oil/water separator.	Tank farm	Franchisee	TMEIA Industry Standards e.g. Oil Companies International Marine Forum			Y	Franchisee	Pending
6.7	Section 6	All tanks shall be bunded to a capacity of at least 150% of the largest individual tank in each compound by 2040. Tank pits shall be protected by an impermeable bed (e.g. geotextile sheeting) to prevent seepage of aviation fuel to ground. A leak detection system shall be installed beneath the containment membrane.	Tank farm	Franchisee	TMEIA Hong Kong Code of Practice for Oil Installations, 1992			Y	Franchisee	Pending
6.7	Section 6	There shall be no direct outlet from the bund. A collection pump shall be included in the base. Removal of accumulated rainwater shall be activated manually and discharged to storm drain via an oil/water separator.	Tank farm	Franchisee	TMEIA			Y	Franchisee	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.7	Section 6	Contingency procedures shall be drawn up to ensure containment and safe disposal of any fuel lost from tanks or pipework. Suitable absorbent materials (e.g. sand or earth) shall be kept on site to deal with spillages.	Tank farm	Franchisee	TMEIA Hong Kong Code of Practice for Oil Installations, 1992			Y	Franchisee	Pending
6.7	Section 6	Valves shall be installed within the storm drainage system to facilitate the retention of spillages.	Tank farm	Franchisee	TMEIA		Y		Franchisee	Pending
6.10	Section 6	Water quality monitoring shall be undertaken for suspended solids, turbidity, and dissolved oxygen.	Design monitoring stations as defined in EM&A Manual, section 6. Construction period when dredging takes place within 1000m of Marine Park and along entire length of the pipeline	Contractor	EM&A Manual		Y		N/A	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
6.10	Section 6	Routine water quality monitoring in the vicinity of the PAFF site to check the effectiveness of the proposed precautionary measures implemented for on-site spill control. The details of the monitoring to be undertaken will be prepared by the Franchisee as part of the PAFF Operations Manual and the details will be agreed with the relevant authorities within 3 months of the commencement of operation of the PAFF. Monitoring should include but not be limited to the parameters of TPH and PAH and reference should be made to the existing monitoring programme undertaken for the fuel tank farm on the HKIA platform.	Operational phase. Location and frequency to be determined and agreed with relevant authorities	Franchisee	EM&A Manual		Y	N/A	Pending	
Ecology										
7.8	5.3	Undertake post construction dolphin abundance monitoring.	Construction	Contractor	TMEIA		Y	N/A	Pending	
7.8	5.3	A 250m dolphin exclusion zone shall be implemented and dredging shall not begin until the observer has confirmed that the area has been clear for 30 minutes.	250m around dredger/throughout dredging in Marine Park and along the length of pipeline	Contractor	TMEIA		Y	N/A	Pending	

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
7.8	5.3	Works will be restricted to a daily maximum of 12 hours within daylight hours.	Throughout dredging in Marine Park and along the length of the pipeline except for the section crossing Urmston Road Channel	Contractor	TMEIA		Y		N/A	Pending
7.8	5.3	Avoidance of dolphin main calving season between March and August.	Throughout dredging in Marine Park and along the length of the pipeline	Contractor	TMEIA		Y		N/A	Pending
Landscape & Visual										
8.10	7.2.1	The construction programme for the PAFF should be reduced to the shortest possible period.	PAFF site / throughout construction period	Contractor	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	The extent and periphery of the works areas should be managed so that they are as small as possible and do not appear cluttered, untidy and unattractive, particularly to road traffic along Lung Mun Road.	PAFF site / throughout construction period	Contractor	TMEIA		Y	Y	N/A	Ongoing
8.10	7.2.1	Temporary hoarding barriers should be of a recessive visual appearance in both colour and form.	PAFF site / throughout construction period	Contractor	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	Materials should be stored in areas with the least obstruction to residents, pedestrians and traffic.	PAFF site / throughout construction period	Contractor	TMEIA		Y	Y	N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
8.10	7.2.1	All material stockpiles should be covered with an impermeable material and sandbagging diversions should be placed around exposed soil.	PAFF site / throughout construction period	Contractor	TMEIA		Y	Y	N/A	Ongoing
8.10	7.2.1	Conservation of existing and imported soil resources.	PAFF site / throughout construction period of fuel tank expansion	Contractor	TMEIA			Y	N/A	Ongoing
8.10	7.2.1	A landscape perimeter bund comprising containment bund-wall, access road and planting buffer shall be built and maintained around the tank farm.	PAFF site / throughout construction period	Project Proponent	TMEIA	Y	Y	Y	Franchisee	Ongoing
8.10	7.2.1	The design of the PAFF should incorporate materials, details and textures which are visually recessive.	PAFF site / design	Project Proponent	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	Colours should be of low chromatic intensity to reduce the potential contrast between the structure and their background.	PAFF site tanks / design	Project Proponent	TMEIA	Y	Y		N/A	Ongoing
8.10	7.2.1	Visually permeable security fencing should be used around the perimeter.	Site perimeter	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing
8.10	7.2.1	Minimum amount of lighting for the tanks shall be used, only applied for safety at the key access points and staircases.	Tanks / Operational phase	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing
8.10	7.2.1	Limited lighting intensity on the site.	PAFF site / Operational phase	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing
8.10	7.2.1	Directional down lighting is suggested to minimise light spill to the surrounding area.	PAFF site / Operational phase	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
Cultural Heritage										
9.8.1	9.2.1	Undertake a watching brief during dredging of the pipeline within 25m either side of anomalies SS1 and SS2. This should comprise: <ul style="list-style-type: none"> Dredge operators to be made aware of the potential presence of cultural heritage material. The operators would be required to report to the AMO any unusual resistance and/or recovery of timbers, anchors or other wreck related material. Any obstacles encountered during the dredging that are of timber should be reported to the marine archaeologist. The obstacle should be avoided and not removed until it has been assessed by the marine archaeologist as to whether the obstacle is of cultural heritage importance; A marine archaeologist shall be on board the dredging barge during dredging within 25m either side of SS1 and SS2 in the event of any unusual resistance occurring or blockages which requires the dredge head to be brought on deck for cleaning and examination; and, 	Within vicinity of SS1 and SS2	Franchisee	TMEIA		Y		N/A	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
		<ul style="list-style-type: none"> Dredging to cease in the nominated area SS1 after 3 meters of sediment removal and after 1 metre for SS2. A dive survey will then be undertaken to examine the trench for possible cultural remains. 								
9.8.2	9.2.1	During the course of the watching brief, if the targets are identified as being potentially archaeologically important, then an immediate marine archaeological impact assessment in accordance with EIAO TM Annex 19 will be required to be undertaken by a qualified marine archaeologist.	With vicinity of SS1 and SS2	Franchisee	TMEIA		Y		N/A	Pending
9.8.4	9.2.1	Any changes, additions or alterations to the dredging method and alignment should be further assessed by marine archaeologist to determine if any further assessment is required.	Pipeline alignment	Franchisee	TMEIA		Y		N/A	Pending
Fuel Spill Risk										
11.4.1	10.2	Tank farms will be constructed in a bunded area surrounding the tanks which will have collection capacity of 150% of the maximum content of the largest tank.	Tank farm / Design Phase	Franchisee	TMEIA		Y		N/A	Pending
11.4.1	10.2	Emergency shut down valves shall be installed within the wider site storm drainage system.	Tank farm / Design Phase	Franchisee	TMEIA		Y		N/A	Pending
11.4.1	10.2	An impermeable membrane shall be installed in the tank foundation beneath the tank bottom.	Tank farm / Design Phase	Franchisee	TMEIA		Y		N/A	Pending
11.4.1	10.2	Pipeline to be covered with a protective rock armour layer.	Pipelines/ Design Phase	Franchisee	TMEIA		Y		Franchisee	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
11.4.1	10.2	An integrated leak detection system shall be installed to all pipelines to provide early detection of any leak.	Pipelines/ Design Phase	Franchisee	TMEIA	Y			N/A	Pending
11.4.1	10.2	An automatic shut-off system shall be implemented for pipelines.	Pipelines/ Design Phase	Franchisee	TMEIA	Y			N/A	Pending
11.4.1	10.2	A workboat shall be on standby at the jetty during tanker berthing.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y	Y		N/A	Pending
11.4.1	10.2	Skimmers shall be available for quick deployment in case of a spill.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y	Y		N/A	Pending
11.4.1	10.2	An emergency response plan shall be prepared prior to the operation of the PAFF.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y	Y		N/A	Pending
11.4.1	10.2	Operator-training programme shall be implemented.	Jetty/ During Tanker Berth	Franchisee	TMEIA	Y	Y		N/A	Pending
11.6	10.4	During the planning of the later phase of the tank farm development, in order to ensure that the required mitigation measures are undertaken at that time, review the EIA report only if the latest technology, industrial standards and statutory requirements have changed by that time.	During planning stage for future tank construction	Franchisee	TMEIA		Y		N/A	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
11.6	10.4	Regular inspections and audits will be undertaken by the Franchisee during the operational phase of the facility: <ul style="list-style-type: none"> Two inspections every year of the tank farm, jetty and pipelines including one undertaken pursuant to the Joint Inspection Group (JIG) explained above; Inspection of the whole sub sea pipelines every 5 to 10 years; Health, Safety and Environmental audit of the facility once every 3 years; and, Inspection of the structural integrity of the tanks once per year. 	Operation	Franchisee	TMEIA			Y	N/A	Pending
11.6	10.4	Prepare an Environmental Management Plan to ensure the on-going adequacy of the fuel spill contingency plan and that it is being implemented as required and that the above mitigation measures have been incorporated and are effective.	Within 3 months of start of operation of the PAFF with audits every 24 months	Franchisee	TMEIA			Y	N/A	Pending
Land Contamination										
13.5.1	10.2	Bunding shall be provided by all fuel storage areas to at least 150% of largest individual tank in each compound.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	Pending
13.5.1	10.2	Relevant design standards for storage tanks, pipework, containment and drainage shall be adhered to.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	Pending
13.5.1	10.2	Plant inspections and maintenance shall be undertaken once per month.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
13.5.1	10.2	Impermeable lining shall be provided for all tank pits.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	Pending
13.5.1	10.2	Leak detection systems shall be provided to all valves.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	Pending
13.5.1	10.2	Surface drainage shall be contained and treated prior to discharge.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
13.5.1	10.2	Emergency spill response plans shall be prepared.	Tank farm / Design	Franchisee	TMEIA	Y		Y	N/A	Pending
13.5.1	10.2	Spill control materials and equipment shall be provided on site.	Tank farm / Design	Franchisee	TMEIA	Y		Y	N/A	Pending
13.5.1	10.2	Runoff from the roof of site buildings and landscaped areas shall be conveyed in closed drains to the nearest storm water drain to prevent the generation of excessive quantities of surface water which may be polluted.	Tank farm / Design	Franchisee	TMEIA	Y		Y	N/A	Pending
13.5.5	10.2	Suitable absorbent materials (e.g. sand or earth) shall be kept on site to deal with spills. Chemical dispersants shall not be employed.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	Pending
13.5.5	10.2	The facility shall be designed, constructed, operated and maintained in full accordance with the Code of Practice for Oil Installations, 1992.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
13.5.5	10.2	Tank pressure testing shall be carried out routinely to check for possible tank leaks. Product inventory monitoring shall be integrated into site management procedures to check for any abnormal or unexpected product loss.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
13.5.5	10.2	Tank overflow monitoring systems shall be installed and regularly tested. Inlet valves shall be designed to automatically shutdown on exceedance of "high-high level" to prevent over-filling.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
13.5.5	10.2	Pipe leakages shall be routinely checked for by means of a pressure sensitive leak detection system and routine inventory control.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
13.5.5	10.2	Drainage from areas of hardstanding shall be treated by means of oil/ water separators prior to discharge to storm drain. All surface drainage shall be fitted with closure valves to provided additional containment and facilitate clean up of any leaks.	Tank farm / Design	Franchisee	TMEIA	Y	Y	Y	N/A	Pending
13.5.5	10.2	The delivery pipeline from the jetty and the supply line to the airport shall be fitted with pressure sensitive leak detectors.	Tank farm / Design	Franchisee	TMEIA	Y	Y		N/A	Pending
Waste Management										
14.7.2	8.3.1	The Contractor shall identify a coordinator for the management of waste.	Contract mobilisation	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	The waste coordinator shall prepare and implement a Waste Management Plan which specifies procedures such as ticketing system, to facilitate tracking of loads and to ensure that illegal disposal of waste does not occur, and protocols for the maintenance of records of the quantities of wastes generated, recycled and disposal.	Contract mobilisation	Contractor	TMEIA, Works Branch Technical Circular No. 5/99 for the Trip-ticket System for Disposal of Construction and Demolition Material		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2	8.3.1	The Contractor shall apply for and obtain the appropriate licenses for the disposal of public fill, chemical waste and effluent discharges.	Contract mobilisation	Contractor	TMEIA, Land (Miscellaneous Provisions) Ordinance (Cap 28); Waste Disposal Ordinance (Cap 354); Dumping at Sea Ordinance (Cap 466); Water Pollution Control Ordinance.		Y		N/A	Ongoing
14.7.2	8.3.1	No waste shall be burnt on site.	PAFF Site throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Excavated material shall be used on site for purposes of landscaping or formation of bund walls as far as possible.	All site / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	All material shall be reused on site as far as practicable, including formwork plywood, topsoil and excavated material.	All site / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Suitable provisions shall be included in the construction contract to ensure that the Contractor sorts and recycles waste.	Contract preparation stage	HyD	TMEIA		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2	8.3.1	Re-use and recycling of waste must always be considered first. Waste disposal shall only be undertaken in the last resort. Any surplus material generated shall be sorted on site into construction and demolition (C&D) waste and the public fill fraction. A sorting facility shall be set up on the site.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	The site and surroundings shall be kept tidy and litter free.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	The C&D waste shall be disposed of at a licensed landfill or deposited at an authorised waste transfer facility and the material suitable for public fill delivered to a public filling area, public filling barging point or public fill stockpile area after obtaining the appropriate licence.	CEDD public fill stockpile in Mui Wo, North Lantau or Mui Wo refuse transfer stations / Throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Stockpile material shall avoid vegetated areas.	All areas / throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2	8.3.1	Stockpiles shall be covered by tarpaulin and/or watered as required.	All areas / throughout construction period, particularly during dry season	Contractor	TMEIA, Public Health and Municipal Services Ordinance (Cap 132) and the Public Cleansing and Prevention of Nuisances (Regional Council) By-laws		Y		N/A	Ongoing
14.7.2	8.3.1	Storage of material on site should be kept to a minimum.	All areas / throughout construction period	Contractor	TMEIA, Public Cleansing and Prevention of Nuisances (Regional Council) By-laws		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2	8.3.1	Excavated material in trucks shall be covered by tarpaulins.	All areas, particularly at site exits / throughout construction period	Contractor	TMEIA, Reduce the potential for spillage and dust. Public Health and Municipal Services Ordinance (Cap 132) and the Public Cleansing and Prevention of Nuisances (Regional Council) By-laws		Y		N/A	Ongoing
14.7.2	8.3.1	Wheel washing facilities shall be used by all trucks leaving the site to prevent the transfer of mud onto public roads.	Site entrances and exits/ throughout construction period	Contractor	TMEIA, Public Cleansing and Prevention of Nuisances (Regional Council) By-laws		Y		N/A	Ongoing
14.7.2	8.3.1	Suitable chemical waste storage areas should be formed at the works site for temporary storage pending collection.	Works site/ throughout construction period	Contractor	TMEIA, Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. A Guide to the Chemical Waste Control Scheme		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2	8.3.1	A licensed contractor shall be employed to collect chemical waste for delivery to a licensed treatment facility.	Chemical waste treatment facility at Tsing Yi / throughout construction period	Contractor	TMEIA, Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes. A Guide to the Chemical Waste Control Scheme		Y		N/A	Ongoing
14.7.2	8.3.1	Temporary storage areas for general refuse should be enclosed to avoid environmental impacts.	All areas/ throughout construction period	Contractor	TMEIA, Public Health and Municipal Services Ordinance		Y		N/A	Ongoing
14.7.2	8.3.1	Sufficient dustbins should be provided for storage of waste.	All areas/ throughout construction period	Contractor	TMEIA, Public Cleansing and Prevention of Nuisances Ordinance (Regional Council) By-laws, Public Health and Municipal Services Ordinance		Y		N/A	Ongoing
14.7.2	8.3.1	General refuse should be cleared daily and should be disposed of to the nearest licensed facility.	All areas, WENT landfill or NWNT refuse transfer stations/ throughout construction period	Contractor	TMEIA, Sanitation and Conservancy (Regional Council) By-laws		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2	8.3.1	Waste oils, chemicals or solvents shall not be disposed of to drain.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Good site practice shall be implemented to avoid waste generation and promote waste minimisation.	PAFF site/ throughout construction period	Contractor	TMEIA		Y			Ongoing
14.7.2	8.3.1	Waste materials such as paper, metal, timber and waste oil shall be recycled as far as practicable.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Temporary structures used during construction shall be provided in the form of proprietary Protakabin type units sited on areas of permanent hard paving units as far as practicable.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Dredged marine mud shall be disposed of in a gazetted marine disposal ground under the requirements of the Dumping at Sea Ordinance.	PAFF site/ throughout construction period				Y		N/A	Ongoing
14.7.2	8.3.1	All waste containers shall be in good condition and fitted with lids or covers to prevent waste from escaping or the ingress of water.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	All waste containers shall be in a secure area on hardstanding.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Emergency equipment to deal with any spillage or fire shall be kept on site.	PAFF site/ throughout construction period		TMEIA		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2	8.3.1	All containers used for storage of chemical waste shall be maintained in good condition and clearly labelled in both English and Chinese.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	All storage areas for chemical waste shall be: <ul style="list-style-type: none"> • Clearly labelled; • Enclosed on at least 3 sides; • Have impermeable floor and bunding sufficient to fully retain any spillage or leakages; • Ventilated; and, • Covered to prevent rainfall from entering. 	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	All types of asbestos including sources (such as clutch linings) shall be treated as chemical waste. Asbestos containing wastes shall be kept separate from other wastes.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	All leaking containers shall be contained and removed from site as soon as is reasonably practicable.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing
14.7.2	8.3.1	Training shall be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling.	PAFF site/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location / Timing	Implementation Agent	Relevant Standard or Requirement	Implementation Schedule			Maintenance Agency	Implementation Status
						D	C	O		
14.7.2 Section 5	8.3.1	EM&A of waste handling, storage, transportation, disposal procedures and documentation through the site audit programme shall be undertaken.	All areas/ throughout construction period	Contractor	TMEIA		Y		N/A	Ongoing

Annex F

QA/QC Results for
Laboratory Testing of
Suspended Solids



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718174
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 17 Dec 2007
Order number	: ----			Date of issue	: 21 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 78
Site	: ----				- Analysed : 78

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718174 supersedes any previous reports with this reference. The completion date of analysis is 20 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718174 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 560693)								
HK0718174-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0
HK0718174-011	MPB1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	12	13.4
EA/ED: Physical and Aggregate Properties (QC Lot: 560694)								
HK0718174-021	IMO1 M ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	8	13.8
HK0718174-043	C2 (NM5) S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 560695)								
HK0718174-053	MP B MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
HK0718174-063	MPB2 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	13	14.7
EA/ED: Physical and Aggregate Properties (QC Lot: 560696)								
HK0718174-073	IMO2 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0718174-095	C1 (NM3) B MF	EA025: Suspended Solids (SS)	----	1	mg/L	18	17	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 560693)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 560694)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 560695)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 560696)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718175
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Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 18 Dec 2007
Order number	: ----			Date of issue	: 21 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718175 supersedes any previous reports with this reference. The completion date of analysis is 21 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718175 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 561449)								
HK0718175-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	18.4
HK0718175-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 561450)								
HK0718175-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0
HK0718175-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 561451)								
HK0718175-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0718175-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 561452)								
HK0718175-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	18	18	0.0
HK0718175-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 561449)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 561450)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 561451)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 561452)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718376
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Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 19 Dec 2007
Order number	: ----			Date of issue	: 24 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718376 supersedes any previous reports with this reference. The completion date of analysis is 21 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718376 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 561464)								
HK0718376-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	12	15.4
HK0718376-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	8	16.4
EA/ED: Physical and Aggregate Properties (QC Lot: 561465)								
HK0718376-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	8	0.0
HK0718376-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 561466)								
HK0718376-058	MPB1 M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
HK0718376-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 561467)								
HK0718376-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
HK0718376-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 561464)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 561465)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 561466)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 561467)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718409
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 20 Dec 2007
Order number	: ----			Date of issue	: 24 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718409 supersedes any previous reports with this reference. The completion date of analysis is 24 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718409 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 562107)								
HK0718409-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0718409-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 562108)								
HK0718409-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0718409-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 562109)								
HK0718409-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
HK0718409-068	IMO1 S DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	6	19.8
EA/ED: Physical and Aggregate Properties (QC Lot: 562110)								
HK0718409-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0718409-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 562107)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562108)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562109)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562110)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718428
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 21 Dec 2007
Order number	: ----			Date of issue	: 28 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718428 supersedes any previous reports with this reference. The completion date of analysis is 24 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718428 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 562194)								
HK0718428-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	14	15	10.4
HK0718428-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	24	22	6.2
EA/ED: Physical and Aggregate Properties (QC Lot: 562195)								
HK0718428-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	14	13	0.0
HK0718428-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 562196)								
HK0718428-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
HK0718428-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 562197)								
HK0718428-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0718428-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 562194)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562195)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562196)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562197)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718519
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 22 Dec 2007
Order number	: ----			Date of issue	: 28 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718519 supersedes any previous reports with this reference. The completion date of analysis is 27 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718519 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 562995)								
HK0718519-002	MP S DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0718519-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 562996)								
HK0718519-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0718519-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 562997)								
HK0718519-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	3	0.0
HK0718519-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 562998)								
HK0718519-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0718519-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	3	4	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 562995)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562996)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562997)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 562998)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718587
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 23 Dec 2007
Order number	: ----			Date of issue	: 28 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718587 supersedes any previous reports with this reference. The completion date of analysis is 27 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718587 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 563004)								
HK0718587-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	12	0.0
HK0718587-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	16.5
EA/ED: Physical and Aggregate Properties (QC Lot: 563005)								
HK0718587-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	13	0.0
HK0718587-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	10	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563006)								
HK0718587-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	0.0
HK0718587-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563008)								
HK0718587-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
HK0718587-100	C3 (NM6) M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	13	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 563004)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563005)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563006)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563008)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718588
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 24 Dec 2007
Order number	: ----			Date of issue	: 31 Dec 2007
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718588 supersedes any previous reports with this reference. The completion date of analysis is 28 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718588 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 563410)								
HK0718588-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	32	31	3.8
HK0718588-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	16	16	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563411)								
HK0718588-022	IMO1 M DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	17	18	0.0
HK0718588-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	14	13	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563412)								
HK0718588-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	18	17	0.0
HK0718588-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	15	8.1
EA/ED: Physical and Aggregate Properties (QC Lot: 563413)								
HK0718588-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	16	0.0
HK0718588-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	12	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 563410)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563411)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563412)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563413)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718589
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 25 Dec 2007
Order number	: ----			Date of issue	: 2 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718589 supersedes any previous reports with this reference. The completion date of analysis is 31 Dec 2007. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718589 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 563416)								
HK0718589-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	21	19	7.7
HK0718589-012	MPB1 B DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	24	27	12.6
EA/ED: Physical and Aggregate Properties (QC Lot: 563417)								
HK0718589-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	17	15	11.1
HK0718589-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	12	12.6
EA/ED: Physical and Aggregate Properties (QC Lot: 563418)								
HK0718589-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	19	18	0.0
HK0718589-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	18	19	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563419)								
HK0718589-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	17	16	0.0
HK0718589-100	C3 (NM6) M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	11	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 563416)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	89.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563417)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563418)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563419)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718590
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 26 Dec 2007
Order number	: ----			Date of issue	: 2 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718590 supersedes any previous reports with this reference. The completion date of analysis is 2 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718590 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 563421)								
HK0718590-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	24	25	0.0
HK0718590-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	17	16	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563422)								
HK0718590-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	14.0
HK0718590-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	12	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563423)								
HK0718590-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	22	23	4.8
HK0718590-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 563424)								
HK0718590-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	15	15	0.0
HK0718590-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	11	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 563421)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563422)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563423)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 563424)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718679
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 27 Dec 2007
Order number	: ----			Date of issue	: 2 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 76
Site	: ----				- Analysed : 76

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718679 supersedes any previous reports with this reference. The completion date of analysis is 2 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718679 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 564585)								
HK0718679-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	14	19.7
HK0718679-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 564586)								
HK0718679-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	22	21	0.0
HK0718679-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	15	15	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 564587)								
HK0718679-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	19	18	0.0
HK0718679-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	12	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 564588)								
HK0718679-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	56	52	6.6
HK0718679-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	22	24	6.4

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 564585)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564586)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564587)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564588)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718680
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 28 Dec 2007
Order number	: ----			Date of issue	: 3 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718680 supersedes any previous reports with this reference. The completion date of analysis is 1 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718680 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 564594)								
HK0718680-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	0.0
HK0718680-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	12	11.6
EA/ED: Physical and Aggregate Properties (QC Lot: 564595)								
HK0718680-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	14	15	8.2
HK0718680-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 564596)								
HK0718680-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	15	0.0
HK0718680-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	16	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 564597)								
HK0718680-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	30	32	6.8
HK0718680-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	22	21	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 564594)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564595)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564596)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564597)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718681
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 29 Dec 2007
Order number	: ----			Date of issue	: 3 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 76
Site	: ----				- Analysed : 76

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718681 supersedes any previous reports with this reference. The completion date of analysis is 3 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718681 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 564598)								
HK0718681-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	15	16	0.0
HK0718681-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	14	15	9.3
EA/ED: Physical and Aggregate Properties (QC Lot: 564599)								
HK0718681-024	IMO1 B DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	44	40	8.7
HK0718681-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	11.5
EA/ED: Physical and Aggregate Properties (QC Lot: 564600)								
HK0718681-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	0.0
HK0718681-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 564601)								
HK0718681-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0718681-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	14	15	10.4

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 564598)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564599)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564600)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564601)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718776
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 30 Dec 2007
Order number	: ----			Date of issue	: 7 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 76
Site	: ----				- Analysed : 76

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718776 supersedes any previous reports with this reference. The completion date of analysis is 3 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718776 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 564602)								
HK0718776-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	34	34	0.0
HK0718776-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	10	18.5
EA/ED: Physical and Aggregate Properties (QC Lot: 564603)								
HK0718776-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	23	23	0.0
HK0718776-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	11.2
EA/ED: Physical and Aggregate Properties (QC Lot: 564604)								
HK0718776-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	13	13	0.0
HK0718776-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	19	19	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 564605)								
HK0718776-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	25	26	4.0
HK0718776-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	14	6.8

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 564602)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564603)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564604)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 564605)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0718949
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 31 Dec 2007
Order number	: ----			Date of issue	: 4 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718949 supersedes any previous reports with this reference. The completion date of analysis is 4 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718949 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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This document has been electronically signed by those names that appear on this report and are the authorised signatories. Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hona Kona. Chapter 553. Section 6.

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 565639)								
HK0718949-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0718949-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 565640)								
HK0718949-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
HK0718949-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	8	20.0
EA/ED: Physical and Aggregate Properties (QC Lot: 565641)								
HK0718949-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	20.0
HK0718949-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 565642)								
HK0718949-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	11	0.0
HK0718949-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 565639)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	90.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 565640)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 565641)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 565642)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----

Annex G

Impact Water Quality Monitoring Results

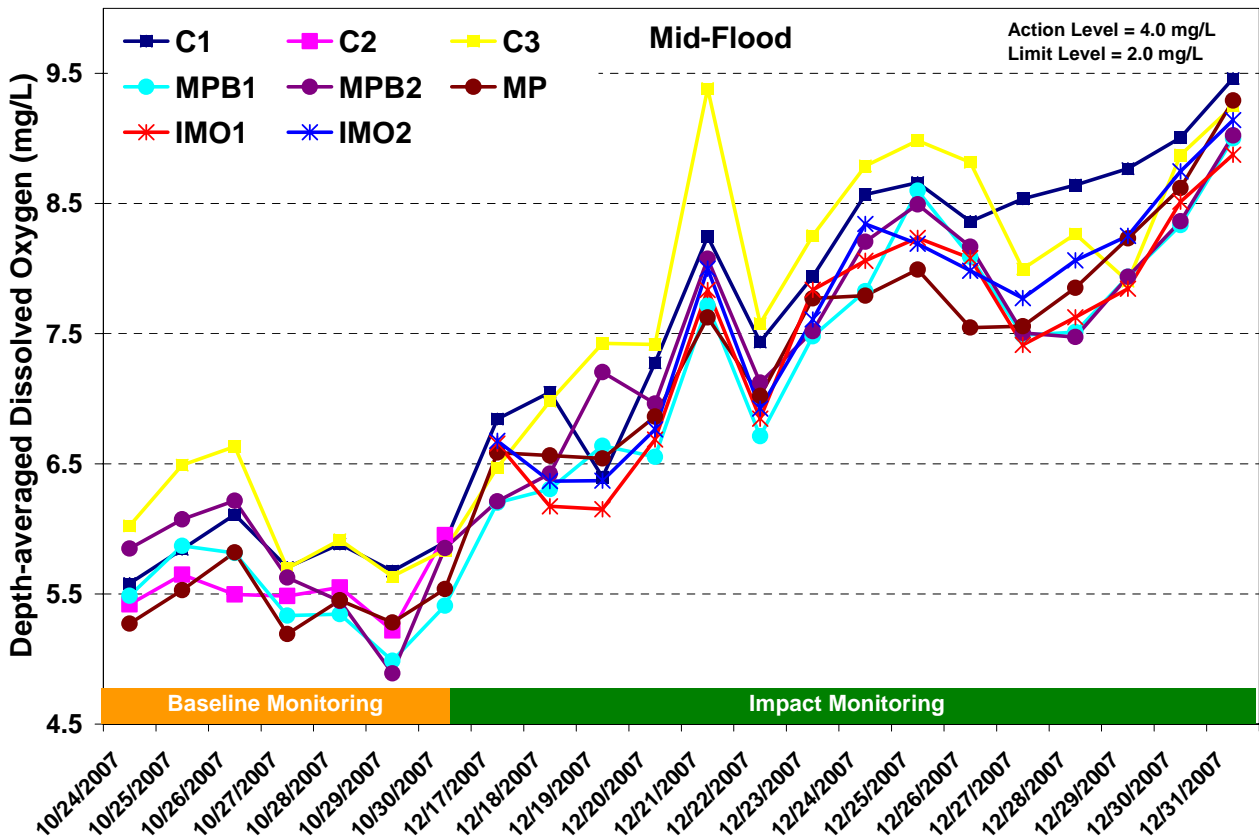
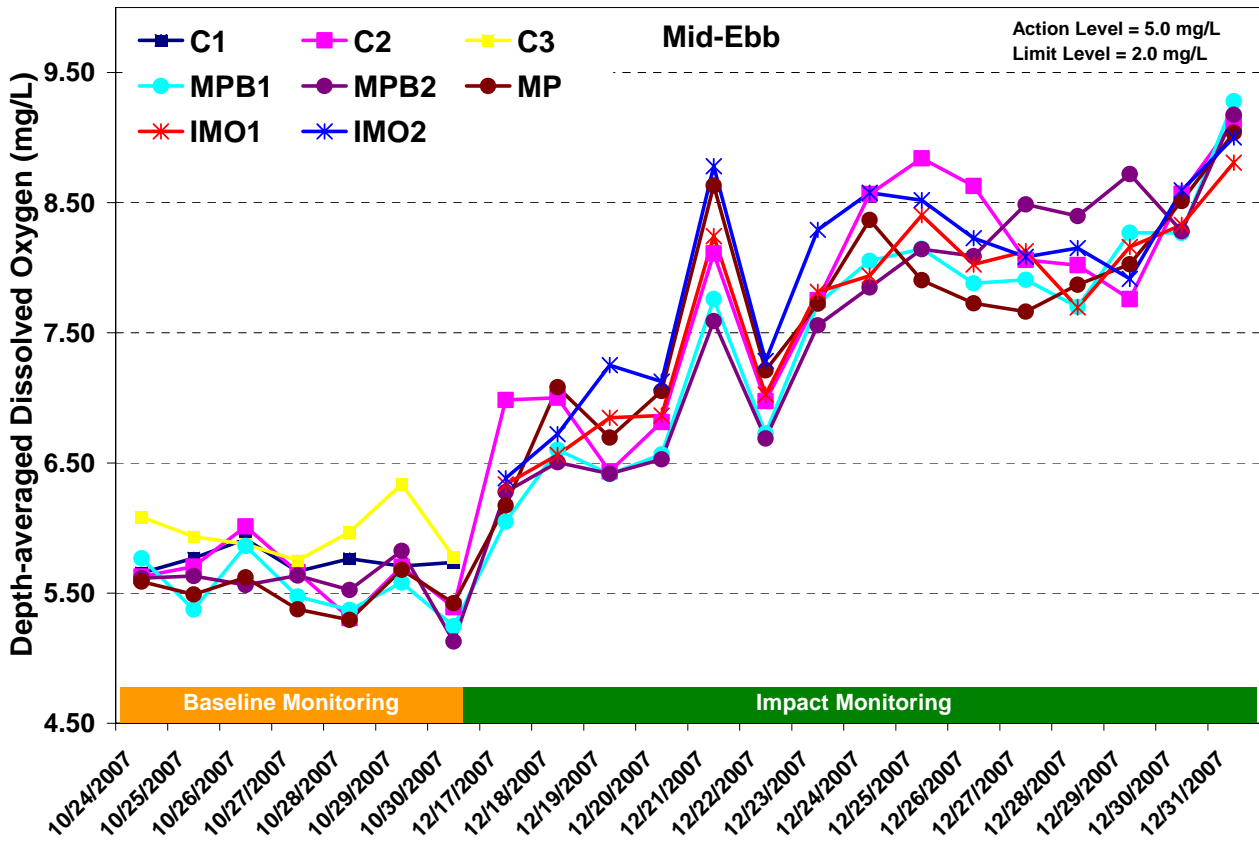


Figure G1 Dissolved oxygen concentration (depth-averaged) (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 17 December and 31 December 2007, and previous monitoring period between 24 October and 30 October 2007

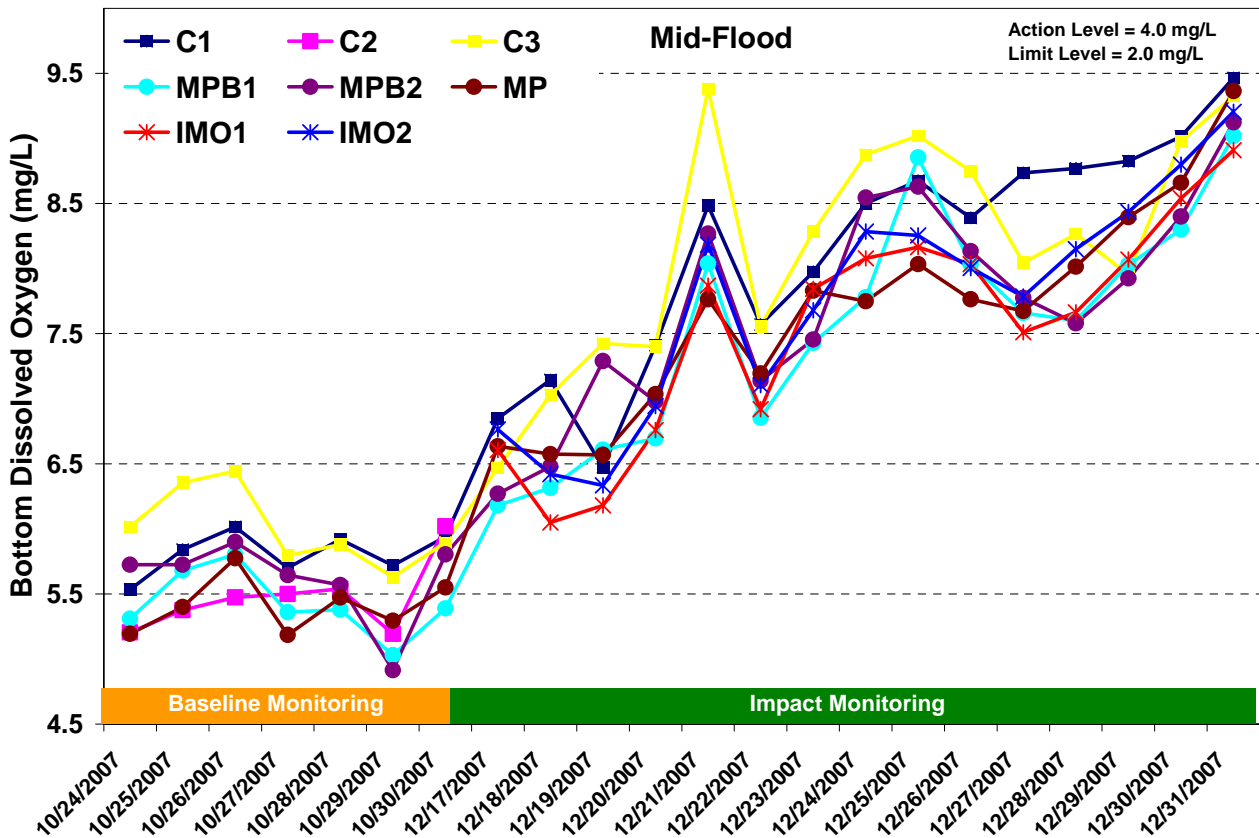
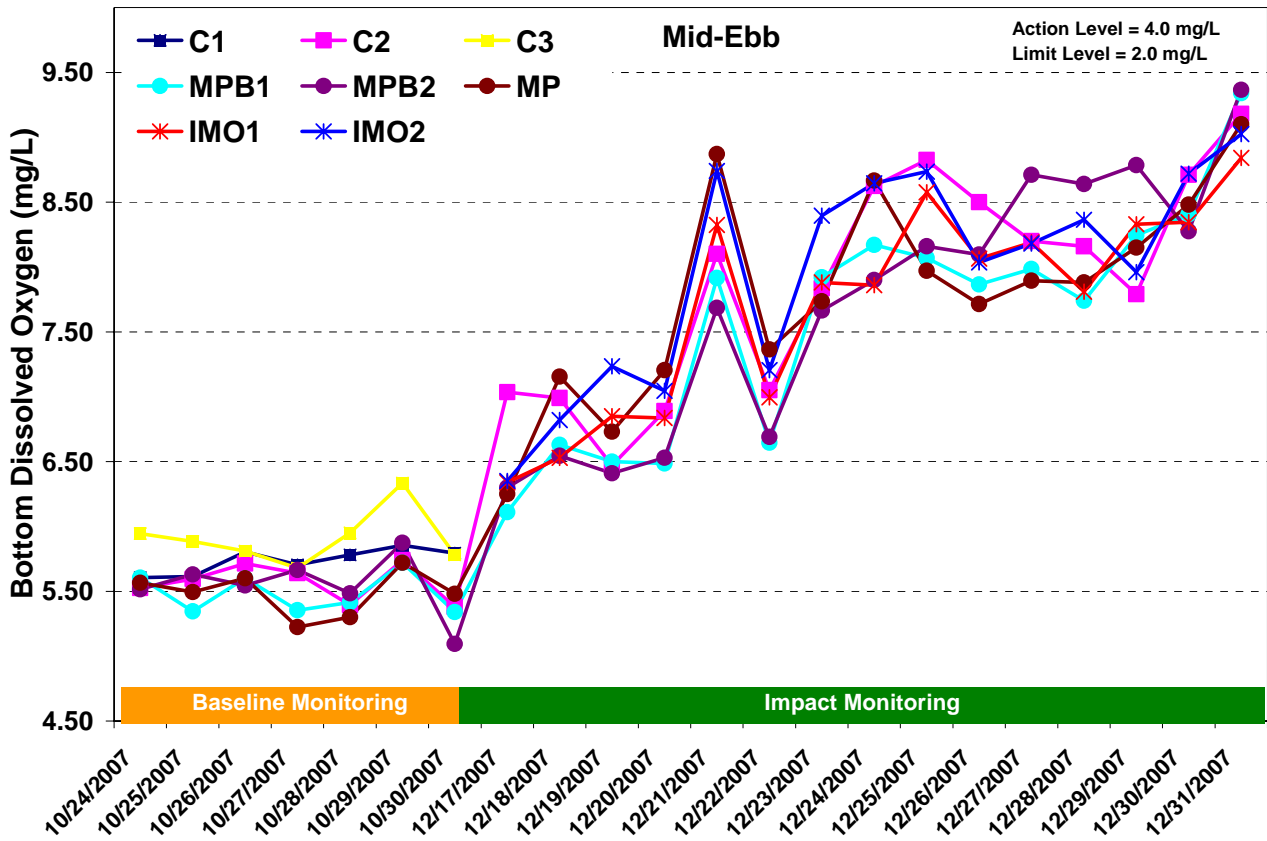


Figure G2 Dissolved oxygen concentration (bottom) (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 17 December and 31 December 2007, and previous monitoring period between 24 October and 30 October 2007

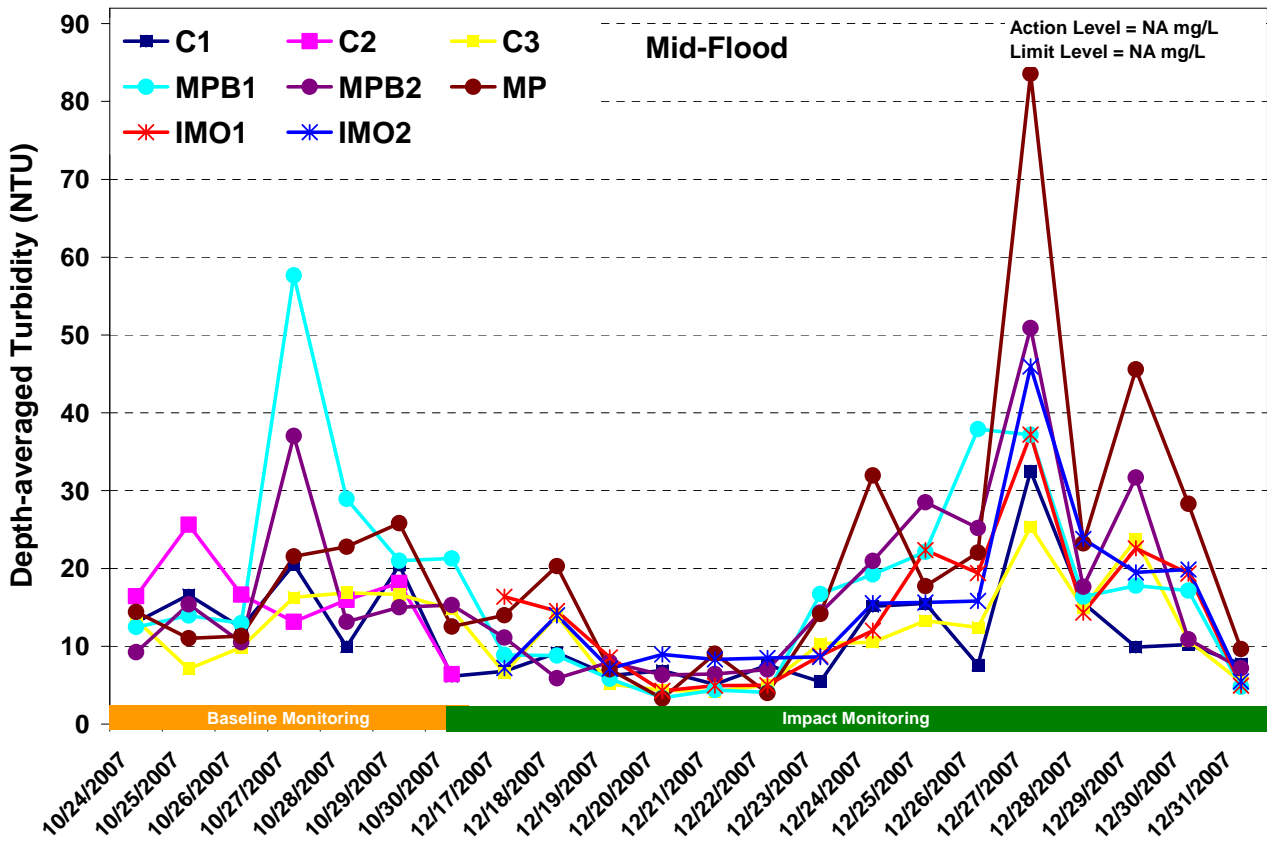
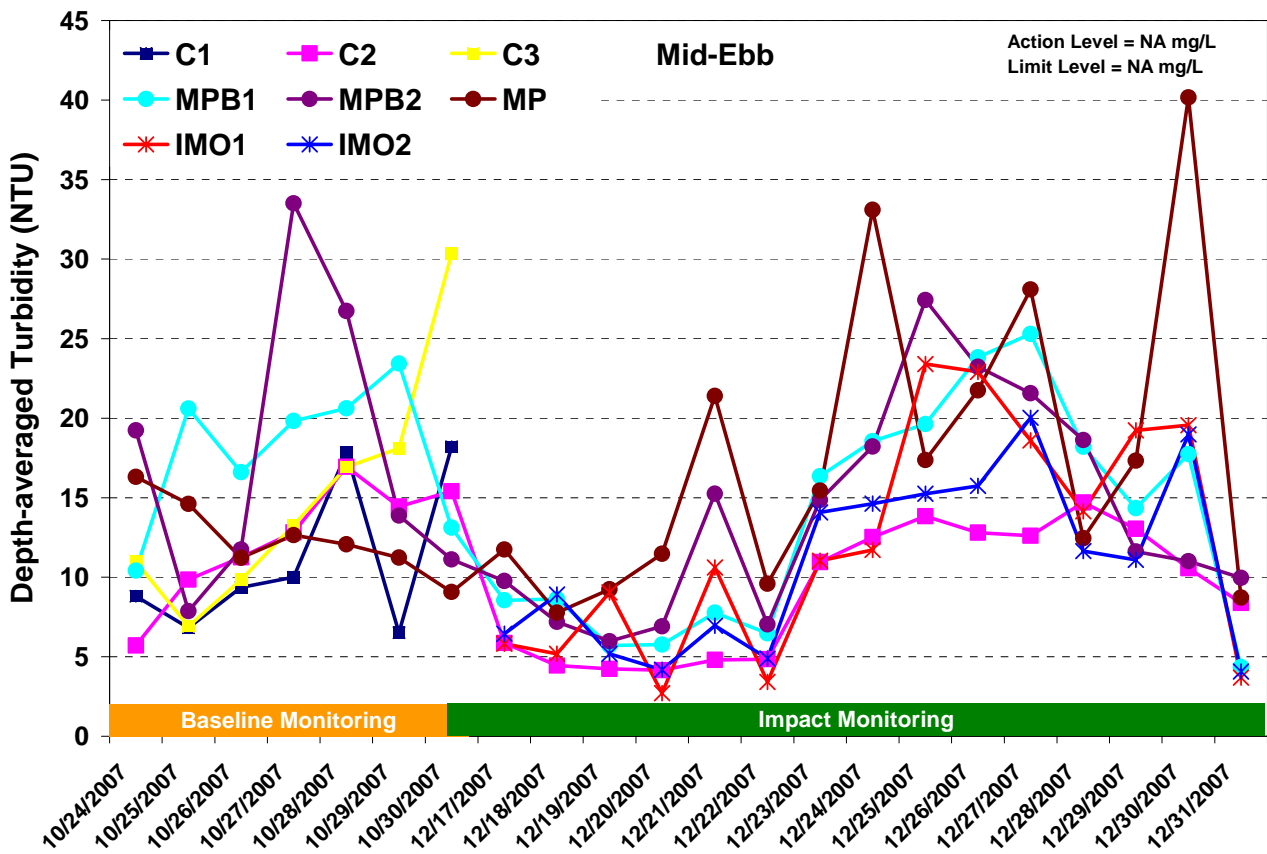


Figure G3 Depth-averaged turbidity (NTU) of water samples from the eight sampling locations at mid-ebb and mid-flood between 17 December and 31 December 2007, and previous monitoring period between 24 October and 30 October 2007



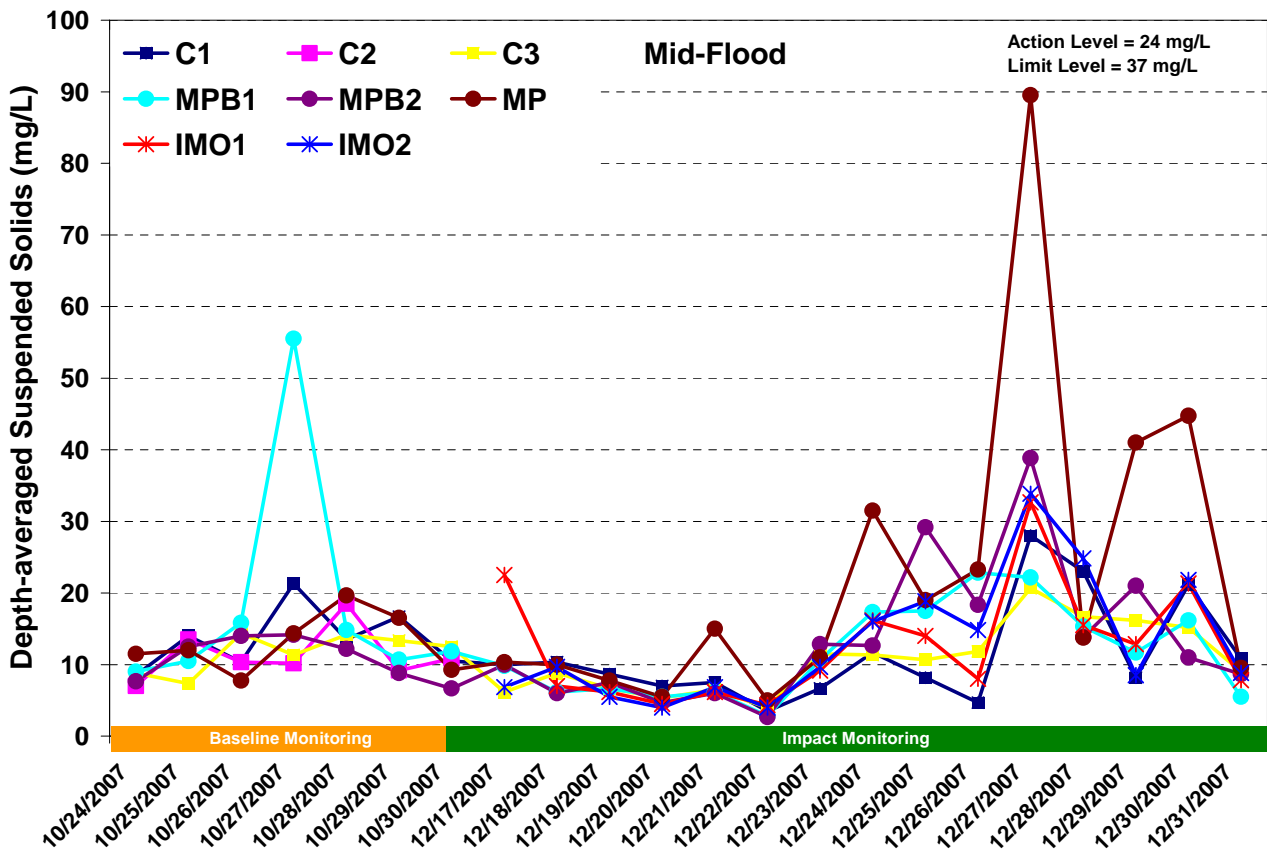
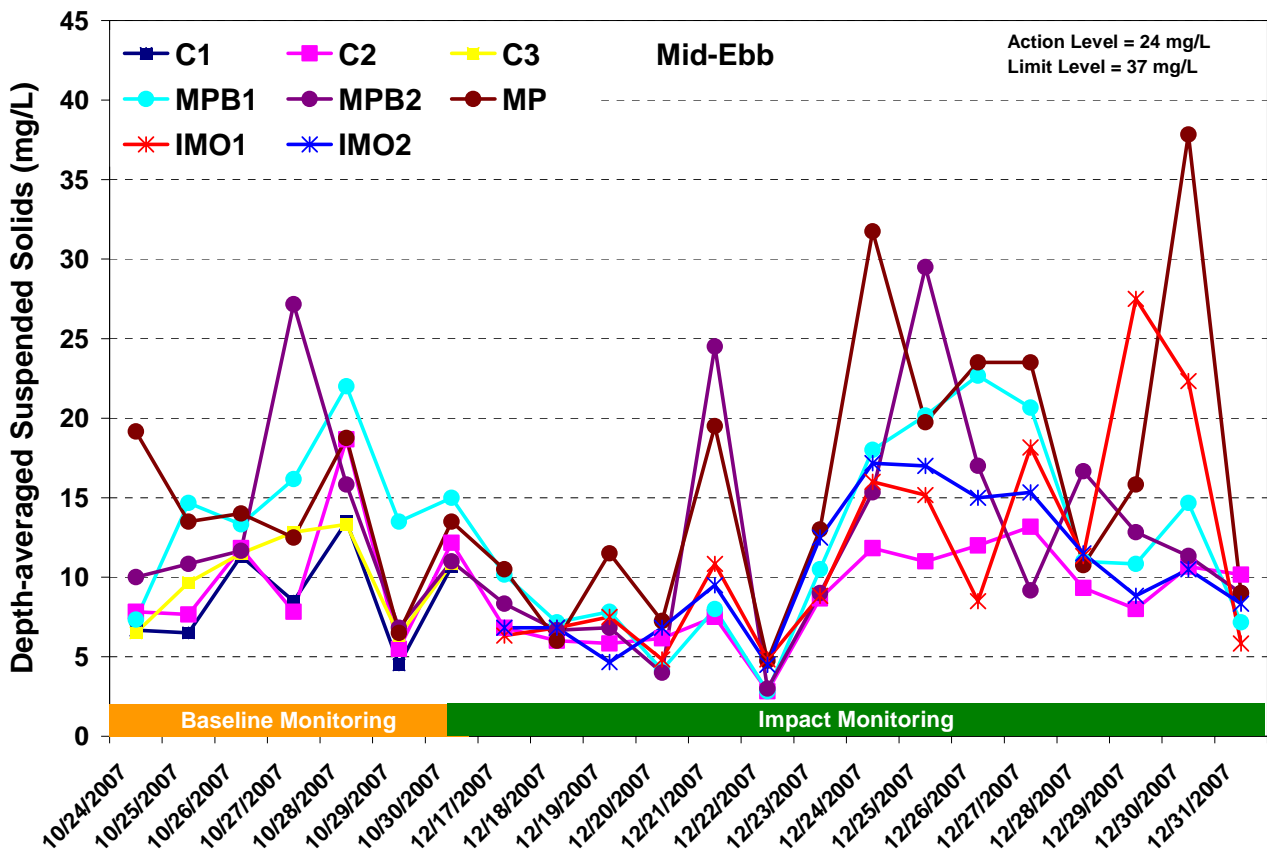


Figure G4 Depth-averaged suspended solids concentration (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 17 December and 31 December 2007, and previous monitoring period between 24 October and 30 October 2007

Ref: 0018105_Annex G_water graphs.doc



Sampling Date	12/17/07
Weather & Ambient Temperature	Cloudy, 24C

Station	C2 (NM5)								
Time (hh:mm)	17:17-17:20								
Water Depth (m)	20.27								
Monitoring Depth (m)	1.00		10.13		19.27				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.2	21.7	21.7	21.8	21.1	20.8	21.37	-	
Salinity (ppt)	39.6	38.1	41.1	44.7	42.7	49.7	42.63	-	
pH	7.8	7.9	8.0	8.0	8.0	8.0	7.94	-	
D.O. Saturation (%)	98.7	98.2	100.8	102.9	101.0	105.6	101.20	-	
D.O. (mg/L)	7.0	6.9	7.0	7.0	7.0	7.1	6.98	7.04	
Turbidity (NTU)	4.3	4.6	4.6	4.6	8.5	8.6	5.87	-	
SS (mg/L)	7.0	7.0	6.0	7.0	6.0	8.0	6.83	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	18:14-18:16						Northing	Easting
Water Depth (m)	15.55						22.21.527	113.54.636
Monitoring Depth (m)	1.00		7.78		14.55			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.5	21.4	21.3	21.3	21.2	20.6	21.20	-
Salinity (ppt)	39.6	39.8	42.7	42.7	43.3	44.1	42.06	-
pH	7.9	8.0	8.0	8.0	8.0	8.0	8.01	-
D.O. Saturation (%)	90.1	91.2	92.2	90.7	90.5	92.8	91.25	-
D.O. (mg/L)	6.3	6.4	6.4	6.3	6.2	6.44	6.34	6.34
Turbidity (NTU)	4.0	4.8	5.3	5.9	7.2	7.7	5.82	-
SS (mg/L)	6.0	4.0	7.0	7.0	8.0	6.0	6.33	-
Remarks								

Station	IMO2						Co-ordinates	
Time (hh:mm)	18:06-18:08						Northing	Easting
Water Depth (m)	10.79						22.21.166	113.54.622
Monitoring Depth (m)	1.00		5.40		9.79			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.5	21.5	21.4	21.4	21.2	21.2	21.36	-
Salinity (ppt)	39.7	39.5	42.1	42.0	43.4	43.0	41.61	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.99	-
D.O. Saturation (%)	91.2	90.9	92.7	92.6	93.4	90.7	91.92	-
D.O. (mg/L)	6.4	6.4	6.4	6.4	6.4	6.27	6.38	6.35
Turbidity (NTU)	4.3	4.2	5.3	5.8	9.4	9.7	6.45	-
SS (mg/L)	4.0	4.0	7.0	7.0	10.0	9.0	6.83	-
Remarks								

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	7.0	7.0	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	7.0	7.0	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	7.6	NA	N	NA	N	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	8.9	8.9	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	17:45-17:47							
Water Depth (m)	8.44							
Monitoring Depth (m)	1.00		4.22		7.44			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.5	21.4	21.3	21.3	21.4	21.4	21.38	-
Salinity (ppt)	39.0	39.3	40.2	40.1	40.6	40.7	39.99	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.91	-
D.O. Saturation (%)	85.2	85.7	86.5	85.8	86.0	89.0	86.37	-
D.O. (mg/L)	6.0	6.0	6.1	6.0	6.0	6.2	6.05	6.11
Turbidity (NTU)	6.8	7.0	9.2	8.6	9.8	9.9	8.55	-
SS (mg/L)	6.0	8.0	13.0	13.0	11.0	10.0	10.17	-
Remarks								

Station	MPB2							
Time (hh:mm)	17:54-17:55							
Water Depth (m)	9.19							
Monitoring Depth (m)	1.00		4.60		8.19			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.5	21.5	21.3	20.8	21.2	21.2	21.24	-
Salinity (ppt)	38.7	38.8	40.2	41.0	42.1	41.8	40.43	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.96	-
D.O. Saturation (%)	87.3	87.6	90.4	90.8	92.4	89.1	89.60	-
D.O. (mg/L)	6.2	6.2	6.3	6.4	6.4	6.2	6.28	6.30
Turbidity (NTU)	6.3	7.4	10.2	11.1	12.3	11.3	9.77	-
SS (mg/L)	6.0	5.0	8.0	6.0	13.0	12.0	8.33	-
Remarks								

Station	MP							
Time (hh:mm)	17:37-17:38							
Water Depth (m)	6.33							
Monitoring Depth (m)	1.00		3.17		5.33			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.4	21.4	21.4	21.4	21.6	21.4	21.45	-
Salinity (ppt)	38.3	38.9	39.9	39.6	40.2	39.7	39.42	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.91	-
D.O. Saturation (%)	86.7	87.5	87.6	87.0	91.0	87.8	87.93	-
D.O. (mg/L)	6.1	6.2	6.1	6.1	6.3	6.2	6.17	6.25
Turbidity (NTU)	8.8	8.0	10.6	12.6	15.8	14.7	11.75	-
SS (mg/L)	7.0	6.0	11.0	9.0	15.0	15.0	10.50	-
Remarks								

Sampling Date	12/18/07
Weather & Ambient Temperature	Cloudy, 21C

Station	C2 (NM5)								
Time (hh:mm)	18:22-18:25								
Water Depth (m)	20.33								
Monitoring Depth (m)	1.00		10.17		19.33				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.8	21.7	21.8	21.9	21.7	21.7	21.78	-	
Salinity (ppt)	38.3	38.3	40.7	40.6	42.1	41.3	40.20	-	
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.92	-	
D.O. Saturation (%)	101.6	99.2	100.2	100.7	102.1	100.6	100.73	-	
D.O. (mg/L)	7.2	7.0	6.9	7.0	7.0	7.0	7.00	6.99	
Turbidity (NTU)	4.1	3.7	3.8	4.0	5.6	5.5	4.45	-	
SS (mg/L)	4.0	6.0	5.0	6.0	9.0	6.0	6.00	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	19:23-19:25						Northing	Easting
Water Depth (m)	17.05						22.21.627	113.54.582
Monitoring Depth (m)	1.00		8.53		16.05			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.6	21.6	21.5	21.6	21.3	21.5	21.51	-
Salinity (ppt)	38.6	38.9	41.0	40.7	41.6	41.1	40.30	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.97	-
D.O. Saturation (%)	95.1	94.5	93.3	93.6	93.6	94.2	94.05	-
D.O. (mg/L)	6.7	6.6	6.5	6.5	6.5	6.55	6.56	6.53
Turbidity (NTU)	4.1	4.3	4.4	4.8	6.9	6.6	5.18	-
SS (mg/L)	6.0	6.0	6.0	7.0	7.0	9.0	6.83	-
Remarks								

Station	IMO2						Co-ordinates	
Time (hh:mm)	18:13-18:14						Northing	Easting
Water Depth (m)	11.14						22.21.165	113.54.662
Monitoring Depth (m)	1.00		5.57		10.14			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	21.7	21.5	21.7	21.7	21.5	21.62	-
Salinity (ppt)	38.4	38.7	39.2	38.7	39.4	40.1	39.07	-
pH	7.9	8.0	8.0	8.0	8.0	8.0	7.95	-
D.O. Saturation (%)	95.1	94.5	94.2	96.2	100.2	95.0	95.87	-
D.O. (mg/L)	6.7	6.6	6.6	6.8	7.0	6.63	6.72	6.82
Turbidity (NTU)	6.8	6.2	9.7	10.2	10.1	10.5	8.92	-
SS (mg/L)	5.0	7.0	5.0	6.0	8.0	10.0	6.83	-
Remarks								

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	7.0	7.0	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	7.0	7.0	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	5.8	NA	N	NA	Y	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	7.8	7.8	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	18:51-18:52							
Water Depth (m)	6.63							
Monitoring Depth (m)	1.00		3.32		5.63			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.6	21.6	21.6	21.6	21.5	21.6	21.57	-
Salinity (ppt)	38.4	38.3	38.6	38.9	39.0	38.4	38.58	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.93	-
D.O. Saturation (%)	93.3	93.5	93.9	93.6	94.2	94.2	93.78	-
D.O. (mg/L)	6.6	6.6	6.6	6.6	6.6	6.6	6.60	6.63
Turbidity (NTU)	7.1	7.0	8.9	8.8	9.6	10.4	8.63	-
SS (mg/L)	6.0	6.0	6.0	7.0	8.0	10.0	7.17	-
Remarks								

Station	MPB2							
Time (hh:mm)	18:59-19:00							
Water Depth (m)	9.09							
Monitoring Depth (m)	1.00		4.55		8.09			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	21.7	21.4	21.5	21.4	21.5	21.53	-
Salinity (ppt)	38.5	38.6	40.2	40.1	40.5	40.7	39.76	-
pH	7.9	7.9	7.9	7.9	8.0	8.0	7.94	-
D.O. Saturation (%)	92.1	94.0	91.2	92.6	91.4	96.3	92.93	-
D.O. (mg/L)	6.5	6.6	6.4	6.5	6.4	6.7	6.51	6.55
Turbidity (NTU)	4.2	3.8	8.6	8.3	9.3	9.0	7.20	-
SS (mg/L)	5.0	6.0	7.0	6.0	8.0	8.0	6.67	-
Remarks								

Station	MP							
Time (hh:mm)	18:41-18:42							
Water Depth (m)	5.82							
Monitoring Depth (m)	1.00		2.91		4.82			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.8	21.8	-	-	21.8	21.7	21.75	-
Salinity (ppt)	37.6	37.2	-	-	37.5	37.9	37.55	-
pH	7.9	7.9	-	-	7.9	7.9	7.90	-
D.O. Saturation (%)	97.2	101.2	-	-	105.0	97.9	100.33	-
D.O. (mg/L)	6.9	7.2	-	-	7.4	6.9	7.08	7.16
Turbidity (NTU)	6.2	5.9	-	-	9.7	9.3	7.78	-
SS (mg/L)	6.0	6.0	-	-	6.0	6.0	6.00	-
Remarks								

Sampling Date	12/19/07
Weather & Ambient Temperature	Cloudy, 19C

Station	C2 (NM5)								
Time (hh:mm)	8:03-8:05								
Water Depth (m)	20.65								
Monitoring Depth (m)	1.00		10.33		19.65				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.5	21.6	20.3	21.6	20.3	21.6	21.15	-	
Salinity (ppt)	40.4	40.9	45.8	44.4	46.0	45.0	43.75	-	
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.97	-	
D.O. Saturation (%)	94.0	93.3	92.1	92.6	93.0	96.2	93.53	-	
D.O. (mg/L)	6.6	6.5	6.4	6.3	6.4	6.5	6.44	6.47	
Turbidity (NTU)	4.8	3.9	3.6	3.9	4.5	4.7	4.23	-	
SS (mg/L)	6.0	5.0	7.0	7.0	6.0	4.0	5.83	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	7:42-7:43						Northing	Easting
Water Depth (m)	13.59						22.21.528	113.54.492
Monitoring Depth (m)	1.00		6.80		12.59			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.4	22.4	21.9	22.4	21.7	21.9	22.11	-
Salinity (ppt)	36.5	36.3	40.6	39.8	41.4	41.6	39.37	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.96	-
D.O. Saturation (%)	98.7	98.7	97.2	98.3	98.7	100.0	98.60	-
D.O. (mg/L)	6.9	6.9	6.7	6.8	6.8	6.88	6.85	6.85
Turbidity (NTU)	6.5	6.1	8.6	8.7	12.4	12.0	9.05	-
SS (mg/L)	4.0	5.0	6.0	4.0	7.0	19.0	7.50	-
Remarks								

Station	IMO2						Co-ordinates	
Time (hh:mm)	7:31-7:32						Northing	Easting
Water Depth (m)	11.06						22.21.142	113.54.914
Monitoring Depth (m)	1.00		5.53		10.06			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.9	21.9	20.4	22.4	21.8	21.9	21.72	-
Salinity (ppt)	39.6	39.6	41.8	39.6	41.9	41.0	40.61	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.97	-
D.O. Saturation (%)	102.7	104.8	107.3	101.8	107.9	102.2	104.45	-
D.O. (mg/L)	7.2	7.3	7.6	7.0	7.4	7.05	7.25	7.24
Turbidity (NTU)	3.7	3.8	5.2	5.1	6.6	6.7	5.18	-
SS (mg/L)	5.0	3.0	5.0	5.0	6.0	4.0	4.67	-
Remarks								

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	6.5	6.5	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	6.4	6.4	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	5.5	NA	Y	NA	N	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	7.6	7.6	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	8:26-8:27							
Water Depth (m)	7.87							
Monitoring Depth (m)	1.00		3.94		6.87			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.1	21.4	21.6	21.6	21.6	21.6	21.63	-
Salinity (ppt)	40.5	41.4	44.2	43.6	44.4	45.0	43.17	-
pH	7.9	7.9	8.0	8.0	8.0	7.9	7.95	-
D.O. Saturation (%)	91.4	93.0	94.1	92.1	93.2	98.1	93.65	-
D.O. (mg/L)	6.3	6.5	6.4	6.3	6.3	6.7	6.41	6.50
Turbidity (NTU)	5.5	5.4	5.5	5.3	6.1	6.5	5.72	-
SS (mg/L)	7.0	10.0	8.0	9.0	6.0	7.0	7.83	-
Remarks								

Station	MPB2							
Time (hh:mm)	8:33-8:34							
Water Depth (m)	8.86							
Monitoring Depth (m)	1.00		4.43		7.86			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.1	21.4	20.2	21.5	21.5	22.2	21.48	-
Salinity (ppt)	41.1	41.6	43.9	42.6	43.4	42.4	42.52	-
pH	8.0	7.9	7.9	8.0	7.9	8.0	7.94	-
D.O. Saturation (%)	91.7	92.8	94.2	92.2	95.5	92.2	93.10	-
D.O. (mg/L)	6.3	6.4	6.6	6.4	6.5	6.3	6.42	6.41
Turbidity (NTU)	6.1	6.0	5.8	6.1	5.8	6.1	5.98	-
SS (mg/L)	7.0	6.0	7.0	7.0	6.0	8.0	6.83	-
Remarks								

Station	MP							
Time (hh:mm)	8:18-8:19							
Water Depth (m)	5.42							
Monitoring Depth (m)	1.00		2.71		4.42			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.4	21.4	-	-	21.5	21.4	21.41	-
Salinity (ppt)	41.7	41.3	-	-	42.4	43.3	42.18	-
pH	7.9	8.0	-	-	7.9	7.9	7.93	-
D.O. Saturation (%)	97.5	94.1	-	-	95.1	100.5	96.80	-
D.O. (mg/L)	6.8	6.6	-	-	6.6	6.9	6.70	6.73
Turbidity (NTU)	9.4	9.6	-	-	9.0	9.0	9.25	-
SS (mg/L)	11.0	9.0	-	-	13.0	13.0	11.50	-
Remarks								

Sampling Date	12/20/07
Weather & Ambient Temperature	Cloudy, 19C

Station	C2 (NM5)								
Time (hh:mm)	9:22-9:23								
Water Depth (m)	19.75								
Monitoring Depth (m)	1.00		9.87		18.75				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.8	21.8	21.9	21.8	20.3	21.7	21.54	-	
Salinity (ppt)	40.8	41.2	42.1	41.9	44.4	42.5	42.14	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.99	-	
D.O. Saturation (%)	98.4	99.2	98.3	97.3	100.9	98.5	98.77	-	
D.O. (mg/L)	6.8	6.9	6.8	6.7	7.0	6.8	6.82	6.89	
Turbidity (NTU)	3.2	3.6	4.4	4.0	4.8	4.9	4.15	-	
SS (mg/L)	6.0	4.0	4.0	6.0	7.0	10.0	6.17	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	9:03-9:04						Northing	Easting
Water Depth (m)	17.00						22.21.634	113.54.598
Monitoring Depth (m)	1.00		8.50		16.00			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.8	21.7	22.3	21.7	22.3	21.7	21.90	-
Salinity (ppt)	40.0	39.9	41.1	41.5	42.0	42.3	41.15	-
pH	7.9	8.0	8.0	8.0	8.0	8.0	7.97	-
D.O. Saturation (%)	100.1	98.4	101.4	97.8	101.5	98.1	99.55	-
D.O. (mg/L)	7.0	6.9	7.0	6.8	6.9	6.74	6.87	6.84
Turbidity (NTU)	2.4	2.4	2.9	2.7	2.9	3.0	2.72	-
SS (mg/L)	6.0	3.0	5.0	5.0	5.0	5.0	4.83	-
Remarks								

Station	IMO2						Co-ordinates	
Time (hh:mm)	8:54-8:56						Northing	Easting
Water Depth (m)	10.69						22.21.170	113.54.673
Monitoring Depth (m)	1.00		5.34		9.69			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.1	21.7	21.7	21.8	22.2	21.7	21.87	-
Salinity (ppt)	37.8	38.3	39.6	39.8	41.2	41.1	39.63	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.95	-
D.O. Saturation (%)	100.9	102.1	100.4	106.0	104.6	100.0	102.33	-
D.O. (mg/L)	7.1	7.2	7.0	7.4	7.2	6.92	7.13	7.05
Turbidity (NTU)	3.4	3.2	4.6	4.8	4.8	4.3	4.18	-
SS (mg/L)	9.0	6.0	7.0	5.0	8.0	6.0	6.83	-
Remarks								

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	6.9	6.9	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	6.8	6.8	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	5.4	NA	N	NA	N	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	8.0	8.0	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	9:47-9:48							
Water Depth (m)	8.05							
Monitoring Depth (m)	1.00		4.03		7.05			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	19.9	19.9	21.5	21.5	21.6	21.6	20.98	-
Salinity (ppt)	42.6	43.2	42.5	41.9	45.2	44.2	43.27	-
pH	7.9	7.9	7.9	7.9	8.0	8.0	7.94	-
D.O. Saturation (%)	94.5	95.3	95.3	93.0	97.1	93.8	94.83	-
D.O. (mg/L)	6.7	6.7	6.6	6.4	6.6	6.4	6.57	6.49
Turbidity (NTU)	4.6	4.6	6.2	5.9	6.7	6.6	5.77	-
SS (mg/L)	4.0	4.0	4.0	4.0	4.0	5.0	4.17	-
Remarks								

Station	MPB2							
Time (hh:mm)	9:55-9:56							
Water Depth (m)	8.64							
Monitoring Depth (m)	1.00		4.32		7.64			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.5	21.5	21.5	20.1	21.6	21.5	21.26	-
Salinity (ppt)	41.7	42.3	43.0	43.7	43.0	44.5	43.02	-
pH	8.0	7.9	7.9	8.0	8.0	8.0	7.96	-
D.O. Saturation (%)	93.3	94.4	95.7	93.4	92.2	98.9	94.65	-
D.O. (mg/L)	6.5	6.5	6.6	6.6	6.3	6.7	6.53	6.53
Turbidity (NTU)	4.4	4.2	7.2	7.2	9.2	9.3	6.92	-
SS (mg/L)	4.0	3.0	5.0	3.0	5.0	4.0	4.00	-
Remarks								

Station	MP							
Time (hh:mm)	9:38-9:38							
Water Depth (m)	5.58							
Monitoring Depth (m)	1.00		2.79		4.58			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.4	21.4	-	-	21.4	19.9	21.05	-
Salinity (ppt)	41.9	42.5	-	-	43.2	45.4	43.25	-
pH	7.9	7.9	-	-	7.9	7.9	7.91	-
D.O. Saturation (%)	97.1	102.7	-	-	97.9	110.2	101.98	-
D.O. (mg/L)	6.7	7.1	-	-	6.7	7.7	7.05	7.21
Turbidity (NTU)	10.5	11.3	-	-	12.1	12.0	11.48	-
SS (mg/L)	8.0	6.0	-	-	7.0	8.0	7.25	-
Remarks								

Sampling Date	12/21/07
Weather & Ambient Temperature	Sunny, 23C

Station	C2 (NM5)								
Time (hh:mm)	10:32-10:34								
Water Depth (m)	20.02								
Monitoring Depth (m)	1.00		10.01		19.02				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	20.6	22.0	21.7	21.8	21.8	21.7	21.60	-	
Salinity (ppt)	41.8	40.1	41.5	41.1	41.1	41.6	41.20	-	
pH	8.0	7.9	8.0	8.0	8.0	8.0	7.99	-	
D.O. Saturation (%)	116.7	116.5	116.3	117.8	118.8	115.9	117.00	-	
D.O. (mg/L)	8.2	8.1	8.0	8.2	8.2	8.0	8.11	8.10	
Turbidity (NTU)	3.9	4.0	5.0	5.0	5.5	5.4	4.80	-	
SS (mg/L)	5.0	6.0	6.0	6.0	13.0	9.0	7.50	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	10:11-10:14						Northing	Easting
Water Depth (m)	16.74						22.21.641	113.54.584
Monitoring Depth (m)	1.00		8.37		15.74			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.8	22.0	21.6	21.6	21.7	21.5	21.70	-
Salinity (ppt)	39.9	39.5	41.1	40.6	40.5	41.4	40.49	-
pH	8.0	8.0	8.1	8.1	8.0	8.1	8.03	-
D.O. Saturation (%)	116.3	119.0	116.4	120.2	123.0	116.9	118.63	-
D.O. (mg/L)	8.1	8.3	8.1	8.4	8.6	8.10	8.24	8.33
Turbidity (NTU)	7.7	7.9	13.8	13.9	10.1	10.3	10.62	-
SS (mg/L)	8.0	8.0	10.0	12.0	14.0	13.0	10.83	-
Remarks								

Station	IMO2						Co-ordinates	
Time (hh:mm)	10:01-10:02						Northing	Easting
Water Depth (m)	10.55						22.21.162	113.54.671
Monitoring Depth (m)	1.00		5.28		9.55			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.9	21.9	21.8	21.9	21.9	21.9	21.86	-
Salinity (ppt)	40.7	40.1	40.8	42.1	44.4	41.1	41.53	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00	-
D.O. Saturation (%)	127.4	126.6	127.0	128.2	129.7	126.2	127.52	-
D.O. (mg/L)	8.8	8.8	8.8	8.8	8.8	8.71	8.78	8.74
Turbidity (NTU)	6.6	6.7	7.0	7.5	6.8	7.1	6.95	-
SS (mg/L)	8.0	9.0	8.0	10.0	11.0	11.0	9.50	-
Remarks								

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.1	8.1	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.1	8.1	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	6.2	NA	Y	NA	Y	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	9.8	9.8	N	N	N	N	N	N	Y	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	10:57-10:59							
Water Depth (m)	8.35							
Monitoring Depth (m)	1.00		4.18		7.35			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.0	22.1	21.9	22.5	21.9	20.4	21.78	-
Salinity (ppt)	41.8	41.0	41.8	40.6	42.4	44.7	42.05	-
pH	7.9	7.9	7.9	8.0	8.0	8.0	7.95	-
D.O. Saturation (%)	111.1	112.3	111.3	112.8	115.7	114.0	112.87	-
D.O. (mg/L)	7.6	7.7	7.7	7.7	7.9	7.9	7.76	7.92
Turbidity (NTU)	6.3	6.1	7.7	7.5	9.8	9.2	7.77	-
SS (mg/L)	7.0	6.0	8.0	6.0	12.0	9.0	8.00	-
Remarks								

Station	MPB2							
Time (hh:mm)	11:06-11:07							
Water Depth (m)	8.89							
Monitoring Depth (m)	1.00		4.45		7.89			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.0	22.5	21.9	21.8	21.9	22.5	22.09	-
Salinity (ppt)	41.1	40.8	41.6	41.3	42.3	41.8	41.51	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.94	-
D.O. Saturation (%)	110.5	108.0	109.4	110.9	115.3	109.9	110.67	-
D.O. (mg/L)	7.6	7.4	7.5	7.7	7.9	7.5	7.59	7.69
Turbidity (NTU)	16.0	15.7	14.5	14.1	15.9	15.3	15.25	-
SS (mg/L)	24.0	29.0	19.0	27.0	22.0	26.0	24.50	-
Remarks								

Station	MP							
Time (hh:mm)	10:49-10:50							
Water Depth (m)	5.61							
Monitoring Depth (m)	1.00		2.81		4.61			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.6	22.7	-	-	22.6	20.5	21.59	-
Salinity (ppt)	41.2	38.6	-	-	38.0	41.1	39.75	-
pH	7.9	7.9	-	-	7.9	7.9	7.93	-
D.O. Saturation (%)	118.7	121.9	-	-	133.4	119.9	123.48	-
D.O. (mg/L)	8.4	8.4	-	-	9.3	8.5	8.63	8.87
Turbidity (NTU)	19.0	18.9	-	-	23.9	23.8	21.40	-
SS (mg/L)	14.0	13.0	-	-	26.0	25.0	19.50	-
Remarks								

Sampling Date	12/22/07
Weather & Ambient Temperature	Cloudy, 23C

Station	C2 (NM5)								
Time (hh:mm)	11:23-11:25								
Water Depth (m)	20.30								
Monitoring Depth (m)	1.00		10.15		19.30				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.4	21.4	21.4	21.4	19.9	21.3	21.13	-	
Salinity (ppt)	40.5	40.8	41.7	41.5	44.0	42.1	41.78	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00	-	
D.O. Saturation (%)	101.7	102.5	101.6	100.6	104.2	101.8	102.07	-	
D.O. (mg/L)	7.0	7.0	6.9	6.9	7.2	6.9	6.98	7.05	
Turbidity (NTU)	3.9	4.3	5.1	4.7	5.5	5.6	4.85	-	
SS (mg/L)	3.0	3.0	3.0	3.0	2.0	3.0	2.83	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	11:04-11:06						Northing	Easting
Water Depth (m)	16.45						22.21.638	113.54.598
Monitoring Depth (m)	1.00		8.23		15.45			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.4	21.3	21.2	21.9	21.8	21.3	21.49	-
Salinity (ppt)	39.7	39.6	41.2	40.7	41.7	42.0	40.79	-
pH	7.9	8.0	8.0	8.0	8.0	8.0	7.98	-
D.O. Saturation (%)	103.4	101.7	101.1	104.7	104.8	101.4	102.85	-
D.O. (mg/L)	7.1	7.0	6.9	7.1	7.1	6.90	7.03	7.00
Turbidity (NTU)	3.1	3.1	3.4	3.6	3.6	3.7	3.42	-
SS (mg/L)	4.0	6.0	4.0	5.0	5.0	5.0	4.83	-
Remarks								

Station	IMO2						Co-ordinates	
Time (hh:mm)	10:56-10:58						Northing	Easting
Water Depth (m)	10.27						22.21.160	113.54.682
Monitoring Depth (m)	1.00		5.13		9.27			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.3	21.7	21.4	21.3	21.3	21.8	21.46	-
Salinity (ppt)	37.9	37.4	39.5	39.2	40.7	40.9	39.27	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.96	-
D.O. Saturation (%)	105.4	104.2	109.3	103.7	103.3	107.9	105.63	-
D.O. (mg/L)	7.4	7.2	7.5	7.2	7.1	7.33	7.29	7.21
Turbidity (NTU)	3.9	4.1	5.5	5.3	5.0	5.5	4.88	-
SS (mg/L)	5.0	5.0	4.0	4.0	5.0	4.0	4.50	-
Remarks								

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	7.1	7.1	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	7.0	7.0	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	6.3	NA	N	NA	N	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	3.7	3.7	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	11:49-11:50							
Water Depth (m)	8.27							
Monitoring Depth (m)	1.00		4.14		7.27			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	19.5	19.5	21.1	21.0	21.2	21.2	20.57	-
Salinity (ppt)	42.8	42.3	42.1	41.5	43.9	44.9	42.91	-
pH	7.9	8.0	8.0	8.0	8.0	8.0	7.95	-
D.O. Saturation (%)	98.6	97.8	98.6	96.3	97.1	100.4	98.13	-
D.O. (mg/L)	6.9	6.9	6.7	6.6	6.6	6.7	6.73	6.65
Turbidity (NTU)	5.3	5.3	6.9	6.6	7.3	7.4	6.47	-
SS (mg/L)	3.0	3.0	3.0	2.0	3.0	3.0	2.83	-
Remarks								

Station	MPB2							
Time (hh:mm)	11:57-11:58							
Water Depth (m)	8.79							
Monitoring Depth (m)	1.00		4.40		7.79			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.1	21.0	21.1	19.7	21.2	21.1	20.85	-
Salinity (ppt)	41.3	42.0	42.6	43.4	42.6	44.1	42.66	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.97	-
D.O. Saturation (%)	96.6	97.7	99.0	96.7	95.5	102.2	97.95	-
D.O. (mg/L)	6.6	6.7	6.7	6.7	6.5	6.9	6.69	6.69
Turbidity (NTU)	5.1	4.9	7.9	7.9	8.3	8.1	7.03	-
SS (mg/L)	3.0	3.0	3.0	3.0	3.0	3.0	3.00	-
Remarks								

Station	MP							
Time (hh:mm)	11:39-11:40							
Water Depth (m)	5.47							
Monitoring Depth (m)	1.00		2.74		4.47			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.0	21.0	-	-	19.5	21.0	20.64	-
Salinity (ppt)	41.6	42.1	-	-	45.0	42.8	42.89	-
pH	7.9	7.9	-	-	7.9	7.9	7.92	-
D.O. Saturation (%)	100.4	106.0	-	-	113.5	101.2	105.28	-
D.O. (mg/L)	6.9	7.2	-	-	7.8	6.9	7.21	7.37
Turbidity (NTU)	8.2	8.7	-	-	10.7	10.8	9.60	-
SS (mg/L)	5.0	5.0	-	-	4.0	5.0	4.75	-
Remarks								

Sampling Date	12/23/07
Weather & Ambient Temperature	Cloudy, 20C

Station	C2 (NM5)								
Time (hh:mm)	12:32-12:35								
Water Depth (m)	19.90								
Monitoring Depth (m)	1.00		9.95		18.90				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.9	21.9	22.0	21.9	22.0	21.9	21.93	-	
Salinity (ppt)	37.4	37.7	38.6	39.4	39.2	40.1	38.73	-	
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.95	-	
D.O. Saturation (%)	107.7	109.2	112.8	110.4	115.1	110.3	110.92	-	
D.O. (mg/L)	7.6	7.7	7.9	7.7	8.0	7.7	7.75	7.84	
Turbidity (NTU)	9.3	10.3	11.0	11.4	11.8	11.9	10.95	-	
SS (mg/L)	10.0	10.0	10.0	9.0	7.0	6.0	8.67	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	12:12-12:15						Northing	Easting
Water Depth (m)	16.58						22.21.630	113.54.593
Monitoring Depth (m)	1.00		8.29		15.58			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.5	22.0	21.9	22.0	21.8	22.4	22.09	-
Salinity (ppt)	37.2	37.2	38.5	37.9	40.0	39.2	38.33	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.96	-
D.O. Saturation (%)	106.2	110.1	111.8	115.7	111.9	115.3	111.83	-
D.O. (mg/L)	7.4	7.8	7.8	8.1	7.8	7.97	7.82	7.88
Turbidity (NTU)	7.4	7.2	13.6	13.1	12.1	12.8	11.03	-
SS (mg/L)	7.0	7.0	8.0	7.0	12.0	12.0	8.83	-
Remarks	Dredging and Dumping works were observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	12:03-12:04						Northing	Easting
Water Depth (m)	10.70						22.21.161	113.54.665
Monitoring Depth (m)	1.00		5.35		9.70			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.0	22.5	22.5	22.4	21.9	20.5	21.97	-
Salinity (ppt)	38.0	37.5	38.1	38.1	40.0	41.2	38.81	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.98	-
D.O. Saturation (%)	118.4	116.4	120.1	117.7	116.6	123.1	118.72	-
D.O. (mg/L)	8.3	8.1	8.4	8.2	8.1	8.70	8.29	8.40
Turbidity (NTU)	12.3	12.9	15.2	15.7	14.2	14.2	14.08	-
SS (mg/L)	9.0	10.0	12.0	11.0	17.0	16.0	12.50	-
Remarks	Dredging and Dumping works were observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	7.8	7.8	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	7.8	7.8	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	14.2	NA	N	NA	N	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	11.3	11.3	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	12:57-12:58							
Water Depth (m)	8.08							
Monitoring Depth (m)	1.00		4.04		7.08			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.8	21.8	21.9	21.9	21.9	22.0	21.88	-
Salinity (ppt)	37.7	37.5	37.9	38.4	38.6	38.4	38.08	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.92	-
D.O. Saturation (%)	107.3	108.6	110.1	107.5	107.9	118.2	109.93	-
D.O. (mg/L)	7.6	7.7	7.7	7.5	7.6	8.3	7.72	7.92
Turbidity (NTU)	13.9	13.3	17.9	17.1	17.7	18.2	16.35	-
SS (mg/L)	8.0	8.0	8.0	8.0	15.0	16.0	10.50	-
Remarks								

Station	MPB2							
Time (hh:mm)	13:08-13:09							
Water Depth (m)	8.65							
Monitoring Depth (m)	1.00		4.32		7.65			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.8	21.8	21.8	22.3	21.8	21.8	21.89	-
Salinity (ppt)	38.0	38.2	38.7	38.0	38.7	39.2	38.47	-
pH	7.9	7.9	8.0	7.9	8.0	8.0	7.95	-
D.O. Saturation (%)	107.2	106.6	107.3	107.1	111.9	107.2	107.88	-
D.O. (mg/L)	7.5	7.5	7.5	7.5	7.8	7.5	7.56	7.67
Turbidity (NTU)	10.1	10.2	14.6	14.6	20.2	19.4	14.85	-
SS (mg/L)	8.0	9.0	9.0	10.0	9.0	9.0	9.00	-
Remarks								

Station	MP							
Time (hh:mm)	12:49-12:50							
Water Depth (m)	5.69							
Monitoring Depth (m)	1.00		2.85		4.69			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.8	21.8	-	-	21.9	22.4	21.96	-
Salinity (ppt)	37.2	37.4	-	-	37.3	37.3	37.28	-
pH	7.9	7.9	-	-	7.9	7.9	7.91	-
D.O. Saturation (%)	109.3	109.1	-	-	110.5	109.6	109.63	-
D.O. (mg/L)	7.7	7.7	-	-	7.8	7.7	7.73	7.74
Turbidity (NTU)	14.7	14.6	-	-	16.5	16.0	15.45	-
SS (mg/L)	12.0	11.0	-	-	14.0	15.0	13.00	-
Remarks								

Sampling Date	12/24/07
Weather & Ambient Temperature	Cloudy, 19C

Station	C2 (NM5)								
Time (hh:mm)	13:16-13:18								
Water Depth (m)	20.28								
Monitoring Depth (m)	1.00		10.14		19.28				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.9	21.3	20.2	21.3	21.3	20.2	21.04	-	
Salinity (ppt)	38.9	39.6	40.8	39.5	39.7	40.5	39.83	-	
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.07	-	
D.O. Saturation (%)	120.4	120.8	122.5	121.1	121.1	122.5	121.40	-	
D.O. (mg/L)	8.4	8.5	8.7	8.5	8.5	8.7	8.57	8.63	
Turbidity (NTU)	11.5	11.1	12.4	12.7	13.8	13.6	12.52	-	
SS (mg/L)	12.0	10.0	14.0	11.0	12.0	12.0	11.83	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	12:56-12:58						Northing	Easting
Water Depth (m)	16.59						22.21.535	113.54.460
Monitoring Depth (m)	1.00		8.29		15.59			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	22.2	20.4	21.5	21.6	21.6	21.47	-
Salinity (ppt)	38.3	38.2	40.2	39.4	39.8	40.1	39.32	-
pH	8.0	8.0	8.1	8.1	8.1	8.1	8.03	-
D.O. Saturation (%)	113.3	112.7	114.9	112.4	113.4	111.5	113.03	-
D.O. (mg/L)	8.0	7.9	8.2	7.9	7.9	7.79	7.94	7.86
Turbidity (NTU)	13.0	13.1	11.1	11.7	10.8	10.6	11.72	-
SS (mg/L)	15.0	16.0	17.0	17.0	15.0	16.0	16.00	-
Remarks	Floating rubbish was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	12:45-12:46						Northing	Easting
Water Depth (m)	10.78						22.21.197	113.54.644
Monitoring Depth (m)	1.00		5.39		9.78			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.6	21.6	21.6	21.7	21.7	21.6	21.63	-
Salinity (ppt)	38.4	38.0	38.5	38.9	39.8	38.9	38.73	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98	-
D.O. Saturation (%)	121.1	120.7	121.4	122.0	126.7	120.1	122.00	-
D.O. (mg/L)	8.5	8.5	8.6	8.6	8.9	8.44	8.58	8.65
Turbidity (NTU)	14.8	14.9	14.9	14.4	14.3	14.5	14.63	-
SS (mg/L)	15.0	17.0	17.0	16.0	20.0	18.0	17.17	-
Remarks	Floating rubbish was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.6	8.6	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.6	8.6	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	16.3	NA	N	NA	N	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	15.4	15.4	N	N	N	N	N	N	N	N	Y	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	13:42-13:43							
Water Depth (m)	8.42							
Monitoring Depth (m)	1.00		4.21		7.42			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	21.7	21.7	21.8	22.2	21.8	21.83	-
Salinity (ppt)	37.8	37.6	37.9	37.5	37.3	37.9	37.67	-
pH	7.9	7.9	8.0	7.9	7.9	7.9	7.94	-
D.O. Saturation (%)	111.5	113.9	111.3	116.5	120.8	111.7	114.28	-
D.O. (mg/L)	7.9	8.0	7.9	8.2	8.5	7.9	8.05	8.17
Turbidity (NTU)	18.7	18.2	18.6	18.3	18.6	18.9	18.55	-
SS (mg/L)	20.0	16.0	20.0	17.0	18.0	17.0	18.00	-
Remarks								

Station	MPB2							
Time (hh:mm)	13:50-13:51							
Water Depth (m)	8.77							
Monitoring Depth (m)	1.00		4.39		7.77			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.1	22.1	21.5	21.5	21.4	21.4	21.67	-
Salinity (ppt)	38.6	38.8	39.5	39.2	39.3	39.6	39.16	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00	-
D.O. Saturation (%)	111.7	111.2	112.0	112.7	112.7	112.3	112.10	-
D.O. (mg/L)	7.8	7.7	7.9	7.9	7.9	7.9	7.85	7.90
Turbidity (NTU)	15.9	15.7	20.1	20.2	18.7	18.7	18.22	-
SS (mg/L)	16.0	16.0	15.0	16.0	14.0	15.0	15.33	-
Remarks								

Station	MP							
Time (hh:mm)	13:33-13:34							
Water Depth (m)	5.37							
Monitoring Depth (m)	1.00		2.69		4.37			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.8	21.8	-	-	22.3	22.0	21.97	-
Salinity (ppt)	37.2	37.5	-	-	36.9	37.1	37.15	-
pH	7.9	7.9	-	-	7.9	7.9	7.90	-
D.O. Saturation (%)	117.9	110.5	-	-	112.6	133.7	118.68	-
D.O. (mg/L)	8.3	7.8	-	-	7.9	9.4	8.37	8.67
Turbidity (NTU)	33.0	32.2	-	-	34.1	33.1	33.10	-
SS (mg/L)	32.0	36.0	-	-	31.0	28.0	31.75	-
Remarks								

Sampling Date	12/25/07
Weather & Ambient Temperature	Cloudy, 17C

Station	C2 (NM5)								
Time (hh:mm)	12:53-12:55								
Water Depth (m)	20.26								
Monitoring Depth (m)	1.00		10.13		19.26				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	19.8	21.1	21.0	21.0	21.0	21.1	20.85	-	
Salinity (ppt)	39.6	38.4	38.8	38.6	39.0	39.0	38.89	-	
pH	8.0	8.0	8.1	8.1	8.1	8.1	8.06	-	
D.O. Saturation (%)	125.9	122.5	124.9	122.6	122.3	126.7	124.15	-	
D.O. (mg/L)	9.1	8.7	8.9	8.7	8.7	9.0	8.84	8.83	
Turbidity (NTU)	11.7	12.0	14.1	14.7	15.2	15.3	13.83	-	
SS (mg/L)	11.0	10.0	10.0	13.0	10.0	12.0	11.00	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	13:54-13:55						Northing	Easting
Water Depth (m)	16.45						22.21.530	113.54.472
Monitoring Depth (m)	1.00		8.23		15.45			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	21.1	21.6	21.1	21.1	21.2	21.30	-
Salinity (ppt)	38.1	38.8	38.9	39.2	39.5	39.1	38.94	-
pH	8.0	8.1	8.1	8.1	8.1	8.1	8.08	-
D.O. Saturation (%)	117.8	117.7	116.8	119.2	116.8	126.0	119.05	-
D.O. (mg/L)	8.3	8.3	8.2	8.4	8.3	8.90	8.40	8.58
Turbidity (NTU)	21.5	20.8	23.8	27.3	22.2	24.8	23.40	-
SS (mg/L)	22.0	15.0	13.0	12.0	17.0	12.0	15.17	-
Remarks	Brownish water color was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	13:43-13:44						Northing	Easting
Water Depth (m)	10.36						22.21.183	113.54.637
Monitoring Depth (m)	1.00		5.18		9.36			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	20.1	21.1	21.7	20.1	21.3	20.98	-
Salinity (ppt)	38.1	39.4	38.8	38.0	39.8	38.4	38.72	-
pH	8.0	8.0	8.1	8.0	8.0	8.0	8.03	-
D.O. Saturation (%)	115.3	120.9	116.4	121.5	118.6	126.2	119.82	-
D.O. (mg/L)	8.1	8.7	8.3	8.6	8.5	8.95	8.52	8.74
Turbidity (NTU)	14.0	14.1	16.1	16.2	15.2	15.9	15.25	-
SS (mg/L)	20.0	18.0	20.0	16.0	15.0	13.0	17.00	-
Remarks	Brownish water color was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.8	8.8	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.8	8.8	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	18.0	NA	Y	NA	N	NA	Y	NA	Y	NA	N	NA
SS (Depth-averaged)	24.0	37.0	14.3	14.3	N	N	N	N	N	N	Y	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	13:21-13:22							
Water Depth (m)	8.14							
Monitoring Depth (m)	1.00		4.07		7.14			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.2	21.2	21.0	21.0	21.6	21.0	21.17	-
Salinity (ppt)	39.0	39.0	39.4	39.4	39.1	39.5	39.24	-
pH	8.0	8.0	8.1	8.1	8.1	8.1	8.05	-
D.O. Saturation (%)	116.3	115.9	115.1	115.6	114.1	115.0	115.33	-
D.O. (mg/L)	8.2	8.2	8.1	8.2	8.0	8.1	8.15	8.07
Turbidity (NTU)	18.7	18.1	20.1	21.1	19.2	20.6	19.63	-
SS (mg/L)	18.0	19.0	19.0	22.0	19.0	24.0	20.17	-
Remarks	Brownish water color was observed.							

Station	MPB2							
Time (hh:mm)	13:29-13:31							
Water Depth (m)	8.65							
Monitoring Depth (m)	1.00		4.32		7.65			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	21.2	21.1	21.1	21.2	21.1	21.23	-
Salinity (ppt)	38.4	38.7	39.2	38.9	39.2	39.1	38.93	-
pH	8.0	8.0	8.0	8.0	8.0	8.1	8.04	-
D.O. Saturation (%)	114.8	114.9	115.5	115.1	116.1	114.7	115.18	-
D.O. (mg/L)	8.1	8.1	8.2	8.2	8.2	8.1	8.14	8.16
Turbidity (NTU)	27.4	26.7	27.4	28.3	27.3	27.5	27.43	-
SS (mg/L)	19.0	28.0	32.0	31.0	38.0	29.0	29.50	-
Remarks	Brownish water color was observed.							

Station	MP							
Time (hh:mm)	13:11-13:12							
Water Depth (m)	5.60							
Monitoring Depth (m)	1.00		2.80		4.60			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	21.7	-	-	21.2	21.2	21.45	-
Salinity (ppt)	38.6	38.5	-	-	39.2	39.1	38.85	-
pH	8.0	8.0	-	-	8.0	8.0	8.01	-
D.O. Saturation (%)	111.8	111.2	-	-	111.9	112.9	111.95	-
D.O. (mg/L)	7.9	7.8	-	-	8.0	8.0	7.91	7.97
Turbidity (NTU)	17.7	17.2	-	-	17.3	17.3	17.38	-
SS (mg/L)	21.0	19.0	-	-	19.0	20.0	19.75	-
Remarks	Brownish water color was observed.							

Sampling Date	12/25/07
Weather & Ambient Temperature	Cloudy, 16C

Mid-Flood

Station	C1 (NM3)								
Time (hh:mm)	8:36-8:39								
Water Depth (m)	16.04								
Monitoring Depth (m)	1.00		8.02		15.04				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.0	21.1	21.0	21.0	21.0	21.0	20.99	-	
Salinity (ppt)	38.5	38.4	38.7	38.8	39.0	39.0	38.72	-	
pH	8.0	8.0	8.1	8.1	8.1	8.1	8.06	-	
D.O. Saturation (%)	121.2	122.1	121.4	122.1	122.4	121.8	121.83	-	
D.O. (mg/L)	8.6	8.7	8.6	8.7	8.7	8.7	8.66	8.68	
Turbidity (NTU)	13.6	13.7	17.2	17.5	15.1	15.9	15.50	-	
SS (mg/L)	6.0	8.0	8.0	10.0	8.0	9.0	8.17	-	
Remarks									

Station	C3 (NM6)								
Time (hh:mm)	10:00-10:02								
Water Depth (m)	6.78								
Monitoring Depth (m)	1.00		3.39		5.78				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	19.8	21.1	21.0	21.0	21.0	20.9	20.81	-	
Salinity (ppt)	40.1	39.7	40.4	39.4	39.8	43.2	40.45	-	
pH	8.0	8.0	8.0	8.1	8.0	8.0	8.03	-	
D.O. Saturation (%)	125.7	127.1	129.3	124.0	124.3	133.5	127.32	-	
D.O. (mg/L)	9.1	9.0	9.1	8.8	8.8	9.3	8.99	9.02	
Turbidity (NTU)	12.3	12.0	14.2	14.6	13.5	13.2	13.30	-	
SS (mg/L)	11.0	11.0	9.0	11.0	10.0	12.0	10.67	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	8:55-8:58						Northing	Easting
Water Depth (m)	16.67						22.21.524	113.54.477
Monitoring Depth (m)	1.00		8.34		15.67			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.1	21.1	21.1	21.1	21.1	21.6	21.17	-
Salinity (ppt)	39.0	39.1	39.6	39.7	39.6	39.3	39.39	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.09	-
D.O. Saturation (%)	117.4	116.7	117.2	116.8	116.6	115.7	116.73	-
D.O. (mg/L)	8.3	8.3	8.3	8.2	8.2	8.1	8.24	8.17
Turbidity (NTU)	21.5	20.4	24.3	24.4	21.6	21.9	22.35	-
SS (mg/L)	18.0	15.0	12.0	14.0	12.0	13.0	14.00	-
Remarks	Brownish water color was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	9:07-9:09						Northing	Easting
Water Depth (m)	10.30						22.21.187	113.54.659
Monitoring Depth (m)	1.00		5.15		9.30			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.1	21.1	21.0	21.1	21.1	20.0	20.89	-
Salinity (ppt)	39.0	38.8	39.2	39.0	39.0	40.3	39.23	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.06	-
D.O. Saturation (%)	115.1	115.3	115.1	115.2	115.3	116.3	115.38	-
D.O. (mg/L)	8.2	8.2	8.2	8.2	8.2	8.3	8.19	8.26
Turbidity (NTU)	15.0	14.9	16.1	16.4	15.6	15.8	15.63	-
SS (mg/L)	15.0	24.0	17.0	19.0	17.0	21.0	18.83	-
Remarks	Brownish water color was observed.							

Station	MPB1								
Time (hh:mm)	9:33-9:34								
Water Depth (m)	8.32								
Monitoring Depth (m)	1.00		4.16		7.32				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	20.1	21.7	21.7	21.2	20.0	19.9	20.76	-	
Salinity (ppt)	40.1	38.3	38.7	39.3	40.7	40.8	39.64	-	
pH	8.0	8.0	8.0	8.0	8.0	8.1	8.03	-	
D.O. Saturation (%)	122.6	116.2	116.7	123.6	128.8	118.7	121.10	-	
D.O. (mg/L)	8.8	8.2	8.2	8.7	9.2	8.5	8.60	8.86	
Turbidity (NTU)	20.6	20.6	23.2	22.1	22.9	23.3	22.12	-	
SS (mg/L)	17.0	17.0	19.0	16.0	18.0	18.0	17.50	-	
Remarks	Brownish water color was observed.								

Station	MPB2								
Time (hh:mm)	9:42-9:44								
Water Depth (m)	8.78								
Monitoring Depth (m)	1.00		4.39		7.78				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.2	21.2	21.2	21.1	21.2	21.1	21.17	-	
Salinity (ppt)	39.4	39.1	40.0	39.5	40.5	39.6	39.68	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02	-	
D.O. Saturation (%)	120.9	117.0	123.0	117.1	127.3	118.1	120.57	-	
D.O. (mg/L)	8.5	8.3	8.7	8.3	8.9	8.3	8.49	8.63	
Turbidity (NTU)	28.3	28.1	29.1	28.5	28.3	28.8	28.52	-	
SS (mg/L)	29.0	29.0	28.0	28.0	33.0	28.0	29.17	-	
Remarks	Brownish water color was observed.								

Station	MP								
Time (hh:mm)	9:23-9:24								
Water Depth (m)	5.48								
Monitoring Depth (m)	1.00		2.74		4.48				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.2	21.7	-	-	21.2	21.2	21.32	-	
Salinity (ppt)	39.0	38.6	-	-	39.0	39.1	38.91	-	
pH	8.0	8.0	-	-	8.0	8.0	8.01	-	
D.O. Saturation (%)	113.5	112.1	-	-	114.2	113.0	113.20	-	
D.O. (mg/L)	8.0	7.9	-	-	8.1	8.0	7.99	8.04	
Turbidity (NTU)	17.7	17.9	-	-	17.5	17.9	17.75	-	
SS (mg/L)	18.0	20.0	-	-	18.0	20.0	19.00	-	
Remarks	Brownish water color was observed.								

Compliance with Action and Limit Level

Parameter	As in EM&A		Mean(C1+C2)*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.8	8.8	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.8	8.8	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	18.7	NA	Y	NA	N	NA	Y	NA	Y	NA	N	NA
SS (Depth-averaged)	24.0	37.0	12.2	12.2	N	N	N	N	N	N	Y	N	N	N

Sampling Date	12/26/07
Weather & Ambient Temperature	Sunny, 22C

Station	C2 (NM5)								
Time (hh:mm)	13:42-13:44								
Water Depth (m)	20.18								
Monitoring Depth (m)	1.00		10.09		19.18				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.0	21.0	20.8	20.7	20.7	20.7	20.82	-	
Salinity (ppt)	38.9	38.5	38.3	39.1	38.7	39.4	38.80	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.01	-	
D.O. Saturation (%)	119.0	121.4	122.3	120.1	123.3	120.4	121.08	-	
D.O. (mg/L)	8.4	8.6	8.7	8.6	8.8	8.6	8.63	8.70	
Turbidity (NTU)	11.0	10.6	13.2	13.5	14.4	14.1	12.80	-	
SS (mg/L)	12.0	12.0	12.0	12.0	12.0	12.0	12.00	-	
Remarks									

Station	IMO1						Co-ordinates	
Time (hh:mm)	14:43-14:45						Northing	Easting
Water Depth (m)	16.84						22.21.427	113.54.235
Monitoring Depth (m)	1.00		8.42		15.84			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.4	21.4	21.1	21.7	21.3	21.0	21.30	-
Salinity (ppt)	38.9	39.0	39.2	38.4	38.7	39.1	38.89	-
pH	8.0	8.0	8.1	8.0	8.1	8.1	8.04	-
D.O. Saturation (%)	114.3	114.1	114.1	112.5	111.9	114.7	113.60	-
D.O. (mg/L)	8.1	8.1	8.1	7.9	7.9	8.13	8.03	8.02
Turbidity (NTU)	20.3	20.6	23.7	23.5	24.8	24.6	22.92	-
SS (mg/L)	8.0	8.0	9.0	9.0	9.0	8.0	8.50	-
Remarks	Brownish water color was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	14:32-14:34						Northing	Easting
Water Depth (m)	11.27						22.21.047	113.54.484
Monitoring Depth (m)	1.00		5.63		10.27			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.1	21.0	21.0	21.1	20.9	21.4	21.10	-
Salinity (ppt)	39.5	39.8	39.9	39.6	39.9	39.2	39.65	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.07	-
D.O. Saturation (%)	118.0	113.6	114.0	121.7	115.0	117.4	116.62	-
D.O. (mg/L)	8.3	8.0	8.1	8.6	8.1	8.26	8.23	8.19
Turbidity (NTU)	15.0	15.1	15.7	16.6	15.6	16.5	15.75	-
SS (mg/L)	15.0	15.0	14.0	15.0	16.0	15.0	15.00	-
Remarks	Brownish water color was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.7	8.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.6	8.6	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	16.6	NA	Y	NA	N	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	15.6	15.6	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	14:10-14:11							
Water Depth (m)	8.37							
Monitoring Depth (m)	1.00		4.18		7.37			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.6	21.2	20.9	21.1	21.0	21.1	21.13	-
Salinity (ppt)	38.2	38.5	38.9	38.5	39.0	38.7	38.62	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.01	-
D.O. Saturation (%)	111.0	111.5	111.2	112.0	111.1	110.6	111.23	-
D.O. (mg/L)	7.8	7.9	7.9	8.0	7.9	7.9	7.89	7.87
Turbidity (NTU)	24.7	25.2	25.6	21.0	24.9	21.6	23.83	-
SS (mg/L)	26.0	24.0	22.0	22.0	21.0	21.0	22.67	-
Remarks	Brownish water color was observed.							

Station	MPB2							
Time (hh:mm)	14:18-14:20							
Water Depth (m)	8.72							
Monitoring Depth (m)	1.00		4.36		7.72			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.2	20.1	20.0	20.9	20.9	21.3	20.72	-
Salinity (ppt)	38.7	40.0	40.3	39.6	39.8	39.3	39.61	-
pH	8.0	8.0	8.0	8.0	8.0	8.1	8.01	-
D.O. Saturation (%)	113.4	114.9	116.9	112.3	111.9	113.6	113.83	-
D.O. (mg/L)	8.0	8.2	8.4	8.0	7.9	8.0	8.09	7.96
Turbidity (NTU)	18.4	19.2	25.7	24.9	25.5	25.7	23.23	-
SS (mg/L)	17.0	17.0	19.0	17.0	16.0	16.0	17.00	-
Remarks	Brownish water color was observed.							

Station	MP							
Time (hh:mm)	14:01-14:02							
Water Depth (m)	5.50							
Monitoring Depth (m)	1.00		2.75		4.50			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.2	21.1	-	-	21.6	21.1	21.25	-
Salinity (ppt)	39.0	39.1	-	-	38.6	39.1	38.96	-
pH	8.0	8.0	-	-	8.0	8.0	7.99	-
D.O. Saturation (%)	108.9	109.3	-	-	109.8	109.4	109.35	-
D.O. (mg/L)	7.7	7.7	-	-	7.7	7.8	7.73	7.74
Turbidity (NTU)	22.1	21.8	-	-	20.2	22.9	21.75	-
SS (mg/L)	24.0	24.0	-	-	22.0	24.0	23.50	-
Remarks	Brownish water color was observed.							

Sampling Date	12/27/07
Weather & Ambient Temperature	Sunny, 23C

Station	C2 (NM5)								
Time (hh:mm)	13:58-14:01								
Water Depth (m)	20.4								
Monitoring Depth (m)	1.0		10.2		19.4				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.6	21.6	21.6	21.1	21.2	20.9	21.33	-	
Salinity (ppt)	38.0	37.6	38.5	39.6	39.1	39.9	38.79	-	
pH	7.9	7.9	8.0	8.0	8.0	8.1	7.99	-	
D.O. Saturation (%)	108.9	111.4	116.9	115.3	117.8	114.2	114.08	-	
D.O. (mg/L)	7.7	7.9	8.2	8.2	8.3	8.1	8.06	8.20	
Turbidity (NTU)	7.2	8.2	9.1	9.7	20.6	20.8	12.60	-	
SS (mg/L)	8.0	8.0	15.0	16.0	16.0	16.0	13.17	-	
Remarks	Dredging works and brownish water color were observed.								

Station	IMO1						Co-ordinates	
Time (hh:mm)	14:18-14:20						Northing	Easting
Water Depth (m)	11.8						22.21.491	113.54.309
Monitoring Depth (m)	1.0		5.9		10.8			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.3	20.3	21.1	21.1	20.9	21.5	21.04	-
Salinity (ppt)	38.8	39.4	39.0	38.6	39.2	38.2	38.86	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00	-
D.O. Saturation (%)	112.3	114.7	113.6	115.2	113.4	118.0	114.53	-
D.O. (mg/L)	7.9	8.2	8.1	8.2	8.1	8.33	8.13	8.19
Turbidity (NTU)	14.5	15.2	19.5	19.9	21.3	21.2	18.60	-
SS (mg/L)	14.0	14.0	18.0	19.0	22.0	22.0	18.17	-
Remarks	Dredging works was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	14:26-14:28						Northing	Easting
Water Depth (m)	9.4						22.20.989	113.54.408
Monitoring Depth (m)	1.0		4.7		8.4			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.3	21.1	21.4	20.9	21.5	20.9	21.02	-
Salinity (ppt)	39.9	39.5	38.7	39.6	38.4	39.6	39.25	-
pH	8.0	8.0	8.0	8.0	8.0	8.1	8.03	-
D.O. Saturation (%)	114.8	112.5	113.3	113.0	118.2	113.3	114.18	-
D.O. (mg/L)	8.2	8.0	8.0	8.0	8.3	8.02	8.09	8.18
Turbidity (NTU)	14.3	15.1	18.8	19.9	26.6	25.5	20.03	-
SS (mg/L)	11.0	12.0	16.0	15.0	19.0	19.0	15.33	-
Remarks	Dredging works was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.2	8.2	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.1	8.1	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	16.4	NA	Y	NA	Y	NA	Y	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	17.1	17.1	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	13:30-13:32							
Water Depth (m)	8.6							
Monitoring Depth (m)	1.0		4.3		7.6			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.6	20.5	20.1	21.1	21.6	21.1	21.00	-
Salinity (ppt)	38.1	38.6	38.8	38.3	37.4	38.3	38.25	-
pH	7.9	7.8	7.9	7.8	7.9	7.8	7.85	-
D.O. Saturation (%)	110.0	111.1	112.1	107.5	116.8	108.2	110.95	-
D.O. (mg/L)	7.8	8.0	8.1	7.7	8.3	7.7	7.91	7.99
Turbidity (NTU)	18.5	18.1	28.4	27.8	29.2	29.8	25.30	-
SS (mg/L)	8.0	8.0	26.0	26.0	28.0	28.0	20.67	-
Remarks	Dredging works and brownish water color were observed.							

Station	MPB2							
Time (hh:mm)	13:22-13:24							
Water Depth (m)	9.3							
Monitoring Depth (m)	1.0		4.7		8.3			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.7	21.8	21.2	21.3	20.9	20.8	21.28	-
Salinity (ppt)	38.6	38.3	38.8	39.1	40.3	40.0	39.20	-
pH	7.8	7.8	7.8	7.8	7.9	7.9	7.81	-
D.O. Saturation (%)	115.8	120.7	116.4	122.6	125.4	121.1	120.33	-
D.O. (mg/L)	8.1	8.5	8.2	8.7	8.9	8.6	8.49	8.71
Turbidity (NTU)	7.7	8.2	19.2	19.9	39.2	35.2	21.57	-
SS (mg/L)	8.0	8.0	8.0	10.0	10.0	11.0	9.17	-
Remarks	Dredging works and brownish water color were observed.							

Station	MP							
Time (hh:mm)	13:39-13:43							
Water Depth (m)	6.2							
Monitoring Depth (m)	1.0		3.1		5.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.9	21.5	21.1	20.0	21.5	20.1	21.00	-
Salinity (ppt)	37.9	37.9	38.0	39.4	37.9	38.6	38.28	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.88	-
D.O. Saturation (%)	105.5	106.8	106.2	105.8	105.8	114.9	107.50	-
D.O. (mg/L)	7.4	7.6	7.6	7.6	7.5	8.3	7.66	7.90
Turbidity (NTU)	12.0	13.4	28.7	31.3	43.1	40.1	28.10	-
SS (mg/L)	12.0	11.0	18.0	19.0	41.0	40.0	23.50	-
Remarks	Dredging works and brownish water color were observed.							

Sampling Date	12/27/07
Weather & Ambient Temperature	Sunny, 19C

Mid-Flood

Station		C1 (NM3)							
Time (hh:mm)		8:52-8:55							
Water Depth (m)		15.8							
Monitoring Depth (m)		1.0		7.9		14.8			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.0	21.0	21.4	21.0	20.9	19.8	20.85	-	
Salinity (ppt)	38.3	38.1	38.0	38.2	38.8	39.7	38.50	-	
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.11	-	
D.O. Saturation (%)	115.4	119.6	116.7	122.3	119.3	124.3	119.60	-	
D.O. (mg/L)	8.2	8.5	8.3	8.7	8.5	9.0	8.54	8.74	
Turbidity (NTU)	13.9	12.7	37.3	32.4	47.4	51.4	32.52	-	
SS (mg/L)	14.0	14.0	15.0	15.0	54.0	56.0	28.00	-	
Remarks	Dredging works was observed.								

Station		C3 (NM6)							
Time (hh:mm)		10:15-10:17							
Water Depth (m)		6.7							
Monitoring Depth (m)		1.0		3.4		5.7			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.1	21.1	20.9	20.0	21.4	21.0	20.89	-	
Salinity (ppt)	38.6	38.2	38.7	39.1	38.3	38.1	38.50	-	
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.02	-	
D.O. Saturation (%)	110.7	111.7	110.7	113.5	111.5	114.9	112.17	-	
D.O. (mg/L)	7.9	8.0	7.9	8.2	7.9	8.2	8.00	8.05	
Turbidity (NTU)	16.2	15.9	24.8	26.8	34.2	34.3	25.37	-	
SS (mg/L)	15.0	16.0	22.0	23.0	24.0	24.0	20.67	-	
Remarks	Dredging works was observed.								

Station		IMO1						Co-ordinates			
Time (hh:mm)		9:21-9:24						Northing		Easting	
Water Depth (m)		11.6						22.21.391		113.54.327	
Monitoring Depth (m)		1.0		5.8		10.6		Depth-averaged		Bottom	
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	20.9	20.9	20.9	21.0	20.9	21.5	21.01	-			
Salinity (ppt)	37.8	38.2	38.3	37.7	38.1	37.1	37.85	-			
pH	8.0	8.0	8.0	8.0	8.0	7.9	7.96	-			
D.O. Saturation (%)	104.1	103.3	102.0	102.8	102.7	108.0	103.82	-			
D.O. (mg/L)	7.5	7.4	7.3	7.4	7.3	7.7	7.41	7.51			
Turbidity (NTU)	11.5	11.7	28.8	25.5	75.5	70.2	37.20	-			
SS (mg/L)	12.0	13.0	17.0	18.0	66.0	70.0	32.67	-			
Remarks	Dredging works was observed.										

Station		IMO2						Co-ordinates			
Time (hh:mm)		9:13-9:16						Northing		Easting	
Water Depth (m)		9.2						22.21.085		113.54.512	
Monitoring Depth (m)		1.0		4.6		8.2		Depth-averaged		Bottom	
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	21.0	20.9	20.0	20.9	21.5	21.0	20.87	-			
Salinity (ppt)	37.2	37.6	38.1	37.5	37.1	37.2	37.43	-			
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.97	-			
D.O. Saturation (%)	107.9	106.5	110.6	106.8	106.6	111.4	108.30	-			
D.O. (mg/L)	7.7	7.6	8.0	7.7	7.6	8.0	7.77	7.79			
Turbidity (NTU)	25.0	24.3	47.9	43.0	67.1	68.5	45.97	-			
SS (mg/L)	16.0	16.0	29.0	30.0	56.0	56.0	33.83	-			
Remarks	Dredging works was observed.										

Station		MPB1							
Time (hh:mm)		9:45-9:49							
Water Depth (m)		7.9							
Monitoring Depth (m)		1.0		4.0		6.9			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	20.9	21.0	20.9	20.9	21.0	20.9	20.94	-	
Salinity (ppt)	38.5	37.4	37.3	38.3	37.0	37.8	37.73	-	
pH	7.9	7.9	7.9	7.9	7.9	8.0	7.94	-	
D.O. Saturation (%)	103.3	104.4	103.7	102.6	110.9	102.9	104.63	-	
D.O. (mg/L)	7.4	7.5	7.4	7.3	8.0	7.4	7.49	7.66	
Turbidity (NTU)	12.7	13.1	23.1	22.3	73.8	78.1	37.18	-	
SS (mg/L)	12.0	13.0	19.0	19.0	35.0	35.0	22.17	-	
Remarks	Dredging works and brownish water color were observed.								

Station		MPB2							
Time (hh:mm)		9:55-9:59							
Water Depth (m)		8.5							
Monitoring Depth (m)		1.0		4.3		7.5			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.0	20.9	20.9	21.0	20.9	20.1	20.78	-	
Salinity (ppt)	38.0	38.3	38.3	37.9	38.3	38.6	38.22	-	
pH	8.0	8.0	8.0	8.0	8.0	7.9	7.96	-	
D.O. Saturation (%)	103.4	102.2	102.8	104.3	103.2	113.1	104.83	-	
D.O. (mg/L)	7.4	7.3	7.3	7.5	7.4	8.2	7.51	7.78	
Turbidity (NTU)	17.7	17.2	44.1	45.5	88.0	92.8	50.88	-	
SS (mg/L)	14.0	14.0	36.0	35.0	64.0	70.0	38.83	-	
Remarks	Dredging works and brownish water color were observed.								

Station		MP							
Time (hh:mm)		9:36-9:38							
Water Depth (m)		5.4							
Monitoring Depth (m)		1.0		2.7		4.4			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	20.8	20.9	-	-	19.9	20.9	20.63	-	
Salinity (ppt)	37.3	37.1	-	-	37.9	37.3	37.39	-	
pH	7.9	7.9	-	-	7.9	7.9	7.93	-	
D.O. Saturation (%)	103.1	104.0	-	-	108.6	103.6	104.83	-	
D.O. (mg/L)	7.4	7.5	-	-	7.9	7.4	7.56	7.68	
Turbidity (NTU)	80.2	80.8	-	-	86.1	87.2	83.58	-	
SS (mg/L)	50.0	50.0	-	-	134.0	124.0	89.50	-	
Remarks	Dredging works and brownish water color were observed.								

Compliance with Action and Limit Level

Parameter	As in EM&A		Mean(C1+C3)*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.4	8.4	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.3	8.3	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	37.6	NA	N	NA	Y	NA	N	NA	Y	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	31.6	31.6	Y	N	Y	N	N	N	Y	Y	Y	Y

Sampling Date	12/28/07
Weather & Ambient Temperature	Fine, 24C

Station	C2 (NM5)								
Time (hh:mm)	15:05-15:07								
Water Depth (m)	20.3								
Monitoring Depth (m)	1.0		10.2		19.3				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.2	21.3	21.5	21.6	20.0	21.4	21.17	-	
Salinity (ppt)	40.0	38.7	41.5	40.0	42.7	39.9	40.47	-	
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.98	-	
D.O. Saturation (%)	109.9	113.8	114.6	116.0	114.7	117.1	114.35	-	
D.O. (mg/L)	7.7	8.1	7.9	8.1	8.1	8.2	8.02	8.16	
Turbidity (NTU)	13.4	13.1	14.1	15.1	16.2	16.3	14.70	-	
SS (mg/L)	8.0	8.0	11.0	10.0	9.0	10.0	9.33	-	
Remarks	Dredging works was observed.								

Station	IMO1						Co-ordinates	
Time (hh:mm)	14:28-14:30						Northing	Easting
Water Depth (m)	11.2						22.21.367	113.54.236
Monitoring Depth (m)	1.0		5.6		10.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.2	21.2	21.7	21.7	21.1	21.0	21.33	-
Salinity (ppt)	36.4	38.0	38.8	38.3	37.8	39.5	38.13	-
pH	7.9	7.9	7.9	7.9	7.9	8.0	7.91	-
D.O. Saturation (%)	106.1	107.0	108.3	109.9	111.6	108.5	108.57	-
D.O. (mg/L)	7.6	7.6	7.6	7.7	8.0	7.67	7.70	7.81
Turbidity (NTU)	8.3	8.7	13.7	13.2	20.8	20.2	14.15	-
SS (mg/L)	9.0	8.0	12.0	12.0	14.0	13.0	11.33	-
Remarks	Dredging works was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	14:19-14:22						Northing	Easting
Water Depth (m)	9.0						22.20.994	113.54.319
Monitoring Depth (m)	1.0		4.5		8.0			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.4	21.5	20.0	19.9	20.0	19.8	20.43	-
Salinity (ppt)	36.4	37.1	38.2	39.6	38.2	40.3	38.28	-
pH	7.9	7.9	7.9	7.9	7.9	8.0	7.90	-
D.O. Saturation (%)	109.1	110.5	115.2	112.9	117.5	113.9	113.18	-
D.O. (mg/L)	7.8	7.9	8.4	8.2	8.5	8.20	8.15	8.37
Turbidity (NTU)	7.9	7.0	11.4	12.9	15.1	15.6	11.65	-
SS (mg/L)	8.0	7.0	12.0	12.0	17.0	13.0	11.50	-
Remarks	Dredging works was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.2	8.2	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.0	8.0	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	19.1	NA	N	NA	N	NA	N	NA	N	NA	N	NA
SS (Depth-averaged)	24.0	37.0	12.1	12.1	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	14:38-14:40							
Water Depth (m)	8.5							
Monitoring Depth (m)	1.0		4.3		7.5			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.3	21.4	21.1	21.1	21.1	21.0	21.16	-
Salinity (ppt)	36.3	36.1	37.1	36.7	37.6	38.0	36.97	-
pH	7.9	7.9	7.9	7.9	8.0	8.0	7.91	-
D.O. Saturation (%)	106.0	106.7	106.9	108.9	110.2	106.6	107.55	-
D.O. (mg/L)	7.6	7.7	7.7	7.8	7.9	7.6	7.70	7.74
Turbidity (NTU)	8.5	8.5	18.8	18.3	27.7	27.4	18.20	-
SS (mg/L)	8.0	9.0	10.0	12.0	12.0	15.0	11.00	-
Remarks	Dredging works was observed.							

Station	MPB2							
Time (hh:mm)	14:10-14:12							
Water Depth (m)	9.2							
Monitoring Depth (m)	1.0		4.6		8.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	22.0	21.5	21.1	21.2	19.7	21.6	21.17	-
Salinity (ppt)	35.9	36.4	37.6	37.6	40.3	39.1	37.80	-
pH	7.8	7.8	7.8	7.8	7.9	7.9	7.82	-
D.O. Saturation (%)	113.1	115.5	116.9	118.7	120.6	122.3	117.85	-
D.O. (mg/L)	8.0	8.3	8.4	8.5	8.7	8.6	8.40	8.64
Turbidity (NTU)	11.4	12.0	18.8	18.1	25.5	26.0	18.63	-
SS (mg/L)	10.0	10.0	19.0	17.0	24.0	20.0	16.67	-
Remarks	Dredging works was observed.							

Station	MP							
Time (hh:mm)	14:48-14:49							
Water Depth (m)	5.8							
Monitoring Depth (m)	1.0		2.9		4.8			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.4	20.2	-	-	21.1	21.1	20.94	-
Salinity (ppt)	37.7	38.7	-	-	38.4	38.5	38.30	-
pH	7.9	7.9	-	-	7.9	7.9	7.91	-
D.O. Saturation (%)	108.3	111.1	-	-	112.9	109.0	110.33	-
D.O. (mg/L)	7.7	8.0	-	-	8.0	7.7	7.87	7.88
Turbidity (NTU)	10.5	10.5	-	-	14.6	14.2	12.45	-
SS (mg/L)	11.0	9.0	-	-	11.0	12.0	10.75	-
Remarks	Dredging works was observed.							

Sampling Date	12/29/07
Weather & Ambient Temperature	Cloudy, 19C

Station	C2 (NM5)								
Time (hh:mm)	16:10-16:12								
Water Depth (m)	20.1								
Monitoring Depth (m)	1.0		10.1		19.1				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	21.1	21.1	21.0	21.0	21.0	21.1	21.04	-	
Salinity (ppt)	41.3	41.2	41.8	41.9	41.8	41.5	41.59	-	
pH	8.0	8.0	8.1	8.1	8.1	8.1	8.04	-	
D.O. Saturation (%)	110.9	111.0	110.9	110.5	111.0	112.2	111.08	-	
D.O. (mg/L)	7.8	7.8	7.7	7.7	7.8	7.8	7.76	7.79	
Turbidity (NTU)	8.7	9.0	14.9	14.9	15.1	15.7	13.05	-	
SS (mg/L)	9.0	8.0	9.0	8.0	7.0	7.0	8.00	-	
Remarks	Dredging works was observed.								

Station	IMO1						Co-ordinates	
Time (hh:mm)	15:34-15:35						Northing	Easting
Water Depth (m)	10.5						22.21.367	113.54.121
Monitoring Depth (m)	1.0		5.3		9.5			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.1	21.2	21.2	21.1	19.9	21.2	20.94	-
Salinity (ppt)	40.3	40.1	40.4	40.5	42.1	40.5	40.64	-
pH	8.0	8.0	8.0	8.0	8.1	8.0	8.02	-
D.O. Saturation (%)	113.7	114.9	116.5	114.6	116.3	119.7	115.95	-
D.O. (mg/L)	8.0	8.1	8.2	8.1	8.3	8.39	8.16	8.33
Turbidity (NTU)	21.9	21.8	16.6	16.3	19.7	19.1	19.23	-
SS (mg/L)	18.0	18.0	21.0	20.0	44.0	44.0	27.50	-
Remarks	Dredging works and brownish water color were observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	15:41-15:44						Northing	Easting
Water Depth (m)	8.9						22.21.000	113.54.275
Monitoring Depth (m)	1.0		4.5		7.9			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.0	21.1	21.0	21.0	21.0	21.0	21.01	-
Salinity (ppt)	40.8	40.8	41.3	41.4	41.4	41.3	41.15	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.03	-
D.O. Saturation (%)	113.1	112.1	113.3	112.1	112.3	115.1	113.00	-
D.O. (mg/L)	7.9	7.9	7.9	7.8	7.9	8.06	7.92	7.96
Turbidity (NTU)	7.4	7.9	11.8	10.9	14.1	14.5	11.10	-
SS (mg/L)	9.0	7.0	12.0	9.0	8.0	8.0	8.83	-
Remarks	Dredging works was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	7.8	7.8	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	7.8	7.8	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	17.0	NA	Y	NA	N	NA	N	NA	N	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	10.4	10.4	Y	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	15:11-15:13							
Water Depth (m)	8.6							
Monitoring Depth (m)	1.0		4.3		7.6			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	19.9	21.0	21.0	19.9	21.7	21.1	20.77	-
Salinity (ppt)	39.6	38.7	38.8	39.6	39.2	40.2	39.38	-
pH	8.0	8.0	8.0	8.0	8.0	8.1	7.98	-
D.O. Saturation (%)	116.5	113.8	114.8	118.0	119.5	115.5	116.35	-
D.O. (mg/L)	8.4	8.1	8.2	8.5	8.4	8.1	8.27	8.25
Turbidity (NTU)	9.3	9.3	11.5	11.8	22.0	22.2	14.35	-
SS (mg/L)	9.0	11.0	11.0	13.0	10.0	11.0	10.83	-
Remarks	Dredging works was observed.							

Station	MPB2							
Time (hh:mm)	15:01-15:03							
Water Depth (m)	9.2							
Monitoring Depth (m)	1.0		4.6		8.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.0	21.1	21.1	21.2	21.2	21.6	21.19	-
Salinity (ppt)	37.5	37.0	37.7	37.4	37.9	38.5	37.65	-
pH	7.9	7.9	8.0	8.0	8.0	8.0	7.97	-
D.O. Saturation (%)	119.7	121.3	121.9	123.1	127.4	120.6	122.33	-
D.O. (mg/L)	8.6	8.7	8.7	8.8	9.1	8.5	8.72	8.79
Turbidity (NTU)	12.0	12.2	9.4	9.3	13.7	13.1	11.62	-
SS (mg/L)	14.0	14.0	16.0	13.0	11.0	9.0	12.83	-
Remarks	Dredging works was observed.							

Station	MP							
Time (hh:mm)	15:21-15:23							
Water Depth (m)	6.2							
Monitoring Depth (m)	1.0		3.1		5.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.0	21.0	19.9	21.0	21.2	21.0	20.86	-
Salinity (ppt)	38.8	38.7	39.7	38.8	38.2	38.9	38.86	-
pH	8.0	7.9	7.9	8.0	7.9	8.0	7.94	-
D.O. Saturation (%)	111.1	111.3	113.4	111.2	118.2	111.3	112.75	-
D.O. (mg/L)	7.9	7.9	8.2	7.9	8.4	7.9	8.03	8.15
Turbidity (NTU)	16.4	16.0	17.9	17.2	18.4	18.1	17.33	-
SS (mg/L)	15.0	17.0	16.0	14.0	15.0	18.0	15.83	-
Remarks	Dredging works was observed.							

Sampling Date	12/30/07
Weather & Ambient Temperature	Fine, 18C

Station	C2 (NM5)								
Time (hh:mm)	16:58-17:00								
Water Depth (m)	20.2								
Monitoring Depth (m)	1.0		10.1		19.2				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	20.8	20.8	20.8	20.8	20.8	20.7	20.77	-	
Salinity (ppt)	39.0	39.1	39.2	39.1	39.1	39.3	39.13	-	
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.10	-	
D.O. Saturation (%)	118.2	119.7	120.1	119.7	123.2	121.4	120.38	-	
D.O. (mg/L)	8.4	8.5	8.6	8.5	8.8	8.7	8.57	8.71	
Turbidity (NTU)	7.2	7.6	11.5	11.6	12.8	12.7	10.57	-	
SS (mg/L)	9.0	11.0	9.0	9.0	14.0	12.0	10.67	-	
Remarks	Dredging works was observed.								

Station	IMO1						Co-ordinates	
Time (hh:mm)	16:22-16:23						Northing	Easting
Water Depth (m)	10.4						22.21.367	113.54.236
Monitoring Depth (m)	1.0		5.2		9.4			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.8	20.8	20.7	20.8	20.7	20.8	20.77	-
Salinity (ppt)	38.9	39.0	38.9	39.0	38.9	38.9	38.91	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.06	-
D.O. Saturation (%)	117.0	116.6	116.9	116.5	117.0	117.1	116.85	-
D.O. (mg/L)	8.3	8.3	8.3	8.3	8.4	8.34	8.33	8.35
Turbidity (NTU)	15.5	15.5	19.6	19.6	23.3	23.9	19.57	-
SS (mg/L)	19.0	19.0	25.0	25.0	23.0	23.0	22.33	-
Remarks	Dredging works was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	16:29-16:32						Northing	Easting
Water Depth (m)	8.9						22.20.994	113.54.319
Monitoring Depth (m)	1.0		4.5		7.9			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.3	20.7	20.7	20.7	20.7	19.6	20.61	-
Salinity (ppt)	38.0	38.3	38.2	38.5	38.5	39.2	38.44	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.04	-
D.O. Saturation (%)	118.2	120.1	120.3	119.0	119.5	122.2	119.88	-
D.O. (mg/L)	8.4	8.6	8.6	8.5	8.6	8.89	8.60	8.72
Turbidity (NTU)	15.2	15.7	19.6	19.9	21.3	22.2	18.98	-
SS (mg/L)	6.0	8.0	9.0	8.0	12.0	20.0	10.50	-
Remarks	Dredging works was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	8.7	8.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.6	8.6	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	13.7	NA	Y	NA	Y	NA	Y	NA	N	NA	Y	NA
SS (Depth-averaged)	24.0	37.0	13.9	13.9	N	N	N	N	N	N	N	N	Y	Y

Mid-Ebb

Station	MPB1							
Time (hh:mm)	15:59-16:01							
Water Depth (m)	8.3							
Monitoring Depth (m)	1.0		4.2		7.3			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.8	20.8	20.8	20.8	20.9	19.9	20.65	-
Salinity (ppt)	38.6	39.0	38.8	39.1	39.1	39.6	39.02	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.05	-
D.O. Saturation (%)	115.4	114.5	115.9	114.2	114.3	120.4	115.78	-
D.O. (mg/L)	8.2	8.2	8.3	8.1	8.1	8.7	8.27	8.41
Turbidity (NTU)	10.4	10.7	16.5	16.1	26.1	26.6	17.73	-
SS (mg/L)	10.0	14.0	11.0	16.0	18.0	19.0	14.67	-
Remarks	Dredging works was observed.							

Station	MPB2							
Time (hh:mm)	15:49-15:51							
Water Depth (m)	8.6							
Monitoring Depth (m)	1.0		4.3		7.6			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.8	20.8	19.6	20.8	21.1	21.3	20.74	-
Salinity (ppt)	40.0	40.5	41.9	40.1	39.7	40.1	40.38	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.08	-
D.O. Saturation (%)	116.9	115.7	117.2	117.4	120.0	115.4	117.10	-
D.O. (mg/L)	8.3	8.2	8.4	8.3	8.5	8.1	8.28	8.28
Turbidity (NTU)	7.6	7.5	11.9	11.7	13.6	13.8	11.02	-
SS (mg/L)	8.0	10.0	12.0	11.0	14.0	13.0	11.33	-
Remarks	Dredging works was observed.							

Station	MP							
Time (hh:mm)	16:09-16:11							
Water Depth (m)	6.2							
Monitoring Depth (m)	1.0		3.1		5.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	19.3	20.5	20.4	20.3	20.3	20.5	20.21	-
Salinity (ppt)	39.1	37.9	38.0	38.1	38.2	38.0	38.19	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.03	-
D.O. Saturation (%)	118.9	117.2	117.3	117.8	117.5	117.6	117.72	-
D.O. (mg/L)	8.7	8.5	8.5	8.5	8.5	8.5	8.51	8.48
Turbidity (NTU)	35.5	35.2	41.8	41.5	43.1	43.9	40.17	-
SS (mg/L)	34.0	41.0	36.0	37.0	40.0	39.0	37.83	-
Remarks	Dredging works was observed.							

Sampling Date	12/30/07
Weather & Ambient Temperature	Sunny, 17C

Mid-Flood

Station	C1 (NM3)								
Time (hh:mm)	11:48-11:50								
Water Depth (m)	16.3								
Monitoring Depth (m)	1.0		8.2		15.3				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	19.7	20.8	20.8	20.8	20.8	20.7	20.59	-	
Salinity (ppt)	40.0	39.1	38.9	39.4	40.0	39.0	39.40	-	
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.08	-	
D.O. Saturation (%)	125.7	126.8	124.8	127.0	128.1	125.7	126.35	-	
D.O. (mg/L)	9.1	9.0	8.9	9.0	9.1	9.0	9.01	9.02	
Turbidity (NTU)	7.6	7.1	10.1	10.5	13.0	13.1	10.23	-	
SS (mg/L)	26.0	25.0	22.0	20.0	18.0	16.0	21.17	-	
Remarks	Dredging works was observed.								

Station	C3 (NM6)								
Time (hh:mm)	13:07-13:08								
Water Depth (m)	6.5								
Monitoring Depth (m)	1.0		3.3		5.5				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	20.6	21.0	20.6	20.4	20.6	20.5	20.61	-	
Salinity (ppt)	39.9	39.7	40.0	40.3	40.2	40.2	40.02	-	
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.10	-	
D.O. Saturation (%)	125.1	122.6	126.0	123.1	129.2	123.6	124.93	-	
D.O. (mg/L)	8.9	8.7	9.0	8.8	9.2	8.8	8.87	8.98	
Turbidity (NTU)	9.7	9.5	10.4	10.5	12.1	12.2	10.73	-	
SS (mg/L)	12.0	11.0	16.0	15.0	19.0	18.0	15.17	-	
Remarks	Dredging works was observed.								

Station	IMO1						Co-ordinates	
Time (hh:mm)	12:17-12:19						Northing	Easting
Water Depth (m)	10.7						22.20.590	113.53.787
Monitoring Depth (m)	1.0		5.4		9.7			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	19.7	20.8	19.7	20.8	20.9	20.8	20.44	-
Salinity (ppt)	39.8	38.5	39.5	38.7	38.4	38.7	38.94	-
pH	8.1	8.0	8.0	8.1	8.0	8.0	8.04	-
D.O. Saturation (%)	118.4	117.9	119.9	116.8	122.5	116.9	118.73	-
D.O. (mg/L)	8.6	8.4	8.7	8.3	8.7	8.3	8.52	8.54
Turbidity (NTU)	18.8	18.4	19.7	18.2	20.0	21.1	19.37	-
SS (mg/L)	19.0	19.0	21.0	18.0	26.0	25.0	21.33	-
Remarks	Dredging works was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	12:09-12:12						Northing	Easting
Water Depth (m)	8.5						22.21.032	113.54.227
Monitoring Depth (m)	1.0		4.3		7.5			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	21.3	20.7	20.8	20.8	20.7	20.8	20.84	-
Salinity (ppt)	37.3	38.0	37.9	37.7	37.8	37.7	37.70	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.03	-
D.O. Saturation (%)	121.4	121.5	121.5	122.5	122.1	123.1	122.02	-
D.O. (mg/L)	8.7	8.7	8.7	8.8	8.8	8.8	8.75	8.80
Turbidity (NTU)	15.7	15.7	20.5	20.7	23.5	23.2	19.88	-
SS (mg/L)	21.0	17.0	22.0	20.0	25.0	26.0	21.83	-
Remarks	Dredging works was observed.							

Station	MPB1								
Time (hh:mm)	12:40-12:42								
Water Depth (m)	8.5								
Monitoring Depth (m)	1.0		4.3		7.5				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	19.6	20.7	21.3	19.6	20.7	20.7	20.42	-	
Salinity (ppt)	39.4	38.2	37.9	39.6	38.6	38.5	38.68	-	
pH	8.0	8.0	8.0	8.1	8.0	8.0	8.04	-	
D.O. Saturation (%)	116.7	116.1	115.1	116.4	115.6	116.6	116.08	-	
D.O. (mg/L)	8.5	8.3	8.2	8.4	8.3	8.3	8.34	8.30	
Turbidity (NTU)	9.7	9.6	14.3	14.9	27.2	27.2	17.15	-	
SS (mg/L)	12.0	10.0	13.0	14.0	22.0	26.0	16.17	-	
Remarks	Dredging works was observed.								

Station	MPB2							
Time (hh:mm)	12:51-12:52							
Water Depth (m)	8.8							
Monitoring Depth (m)	1.0		4.4		7.8			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.8	20.9	20.8	20.7	20.8	20.9	20.80	-
Salinity (ppt)	39.6	39.2	39.4	39.9	39.7	39.3	39.50	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.07	-
D.O. Saturation (%)	117.1	117.8	118.4	116.9	117.1	119.6	117.82	-
D.O. (mg/L)	8.3	8.4	8.4	8.3	8.3	8.5	8.36	8.40
Turbidity (NTU)	7.5	7.8	11.1	11.8	13.7	13.4	10.88	-
SS (mg/L)	8.0	9.0	10.0	11.0	14.0	14.0	11.00	-
Remarks	Dredging works was observed.							

Station	MP							
Time (hh:mm)	12:31-12:32							
Water Depth (m)	5.8							
Monitoring Depth (m)	1.0		2.9		4.8			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.5	20.5	-	-	20.5	20.6	20.54	-
Salinity (ppt)	37.6	37.7	-	-	37.7	37.7	37.66	-
pH	8.0	8.0	-	-	8.0	8.0	8.00	-
D.O. Saturation (%)	119.5	118.3	-	-	118.7	121.7	119.55	-
D.O. (mg/L)	8.6	8.5	-	-	8.6	8.8	8.62	8.66
Turbidity (NTU)	28.3	28.5	-	-	28.3	28.1	28.30	-
SS (mg/L)	39.0	38.0	-	-	52.0	50.0	44.75	-
Remarks	Dredging works was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		Mean(C1+C3)*130%		IMO1		IMO2		MPB1			MPB2		MP		
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	9.0	9.0	N	N	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	8.9	8.9	N	N	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	13.6	NA	Y	NA	Y	NA	NA	Y	NA	N	NA	Y	NA	NA
SS (Depth-averaged)	24.0	37.0	23.6	23.6	N	N	N	N	N	N	N	N	N	Y	Y	Y

Sampling Date	12/31/07
Weather & Ambient Temperature	Fine, 15C

Station	C2 (NM5)								
Time (hh:mm)	18:13-18:16								
Water Depth (m)	20.1								
Monitoring Depth (m)	1.0		10.1		19.1				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	20.0	19.0	20.0	20.0	19.0	20.5	19.75	-	
Salinity (ppt)	39.0	40.2	39.0	39.2	40.0	38.6	39.31	-	
pH	8.2	8.2	8.2	8.2	8.2	8.2	8.18	-	
D.O. Saturation (%)	126.6	124.1	128.3	123.3	130.1	123.2	125.93	-	
D.O. (mg/L)	9.1	9.1	9.3	8.9	9.5	8.8	9.12	9.18	
Turbidity (NTU)	5.3	5.2	9.8	9.4	10.4	10.2	8.38	-	
SS (mg/L)	8.0	7.0	10.0	10.0	12.0	14.0	10.17	-	
Remarks	Dredging works was observed.								

Station	IMO1						Co-ordinates	
Time (hh:mm)	17:37-17:39						Northing	Easting
Water Depth (m)	11.3						22.21.354	113.54.091
Monitoring Depth (m)	1.0		5.7		10.3			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.0	20.0	20.5	20.0	20.0	20.0	20.12	-
Salinity (ppt)	38.5	38.6	38.2	38.5	38.5	38.5	38.45	-
pH	8.2	8.2	8.2	8.2	8.2	8.2	8.16	-
D.O. Saturation (%)	121.9	121.7	121.0	122.0	122.2	122.0	121.80	-
D.O. (mg/L)	8.8	8.8	8.7	8.8	8.9	8.83	8.81	8.84
Turbidity (NTU)	3.6	3.6	3.5	3.8	3.9	3.7	3.68	-
SS (mg/L)	6.0	4.0	7.0	5.0	6.0	7.0	5.83	-
Remarks	Dredging works was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	17:44-17:47						Northing	Easting
Water Depth (m)	9.1						22.21.030	113.54.212
Monitoring Depth (m)	1.0		4.6		8.1			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.1	20.1	20.1	20.1	20.1	20.1	20.10	-
Salinity (ppt)	38.2	38.3	38.2	38.2	38.3	38.2	38.21	-
pH	8.2	8.2	8.2	8.2	8.2	8.2	8.15	-
D.O. Saturation (%)	123.7	124.0	124.9	123.8	124.0	125.1	124.25	-
D.O. (mg/L)	9.0	9.0	9.1	9.0	9.0	9.07	9.00	9.03
Turbidity (NTU)	3.8	3.9	4.1	4.2	4.2	4.2	4.07	-
SS (mg/L)	8.0	6.0	9.0	7.0	12.0	8.0	8.33	-
Remarks	Dredging works was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	9.2	9.2	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	9.1	9.1	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	10.9	NA	N	NA	N	NA	N	NA	N	NA	N	NA
SS (Depth-averaged)	24.0	37.0	13.2	13.2	N	N	N	N	N	N	N	N	N	N

Mid-Ebb

Station	MPB1							
Time (hh:mm)	17:14-17:16							
Water Depth (m)	8.1							
Monitoring Depth (m)	1.0		4.1		7.1			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	19.0	18.9	20.1	20.0	20.2	20.0	19.71	-
Salinity (ppt)	39.7	39.8	38.6	38.8	38.6	38.8	39.05	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.13	-
D.O. Saturation (%)	127.8	126.7	128.6	125.2	132.6	126.1	127.83	-
D.O. (mg/L)	9.4	9.3	9.3	9.1	9.6	9.1	9.28	9.34
Turbidity (NTU)	3.0	3.3	4.4	4.5	5.5	5.4	4.35	-
SS (mg/L)	5.0	6.0	4.0	16.0	6.0	6.0	7.17	-
Remarks	Dredging works was observed.							

Station	MPB2							
Time (hh:mm)	17:04-17:07							
Water Depth (m)	9.2							
Monitoring Depth (m)	1.0		4.6		8.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	19.8	19.9	19.9	20.0	19.0	19.9	19.76	-
Salinity (ppt)	39.0	38.9	39.0	38.8	39.9	39.0	39.10	-
pH	8.2	8.1	8.2	8.1	8.1	8.1	8.14	-
D.O. Saturation (%)	124.3	126.2	124.1	127.2	132.1	125.4	126.55	-
D.O. (mg/L)	9.0	9.1	9.0	9.2	9.7	9.1	9.18	9.37
Turbidity (NTU)	7.9	8.0	9.7	9.6	12.2	12.4	9.97	-
SS (mg/L)	8.0	8.0	10.0	9.0	11.0	8.0	9.00	-
Remarks	Dredging works was observed.							

Station	MP							
Time (hh:mm)	17:24-17:26							
Water Depth (m)	5.6							
Monitoring Depth (m)	1.0		2.8		4.6			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	20.0	20.4	-	-	19.9	20.5	20.18	-
Salinity (ppt)	37.8	37.4	-	-	38.0	37.5	37.69	-
pH	8.1	8.1	-	-	8.1	8.1	8.11	-
D.O. Saturation (%)	124.3	123.0	-	-	123.8	127.1	124.55	-
D.O. (mg/L)	9.0	8.9	-	-	9.0	9.2	9.04	9.10
Turbidity (NTU)	8.1	8.4	-	-	9.2	9.2	8.73	-
SS (mg/L)	8.0	9.0	-	-	9.0	10.0	9.00	-
Remarks	Dredging works was observed.							

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