





# Permanent Aviation Fuel Facility (EP-262/2007/B)

Seventh Quarterly Environmental Monitoring and Audit Report – July 2008 to September 2008

17 October 2008

#### **Environmental Resources Management**

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#### REPORT

# Permanent Aviation Fuel Facility (EP-262/2007/B) Seventh Quarterly Environmental Monitoring and Audit Report July 2008 to September 2008

17 October 2008

Prepared by: Karen Lui/Clement Pang/Craig A Reid

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For and on behalf of

**Environmental Resources Management** 

Approved by: Craig A Reid

Signed:

Position: Environmental Team Leader

Date: 17 October 2008

This report has been prepared by Environmental Resources Management the trading name of 'ERM Hong-Kong, Limited', with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporating our General Terms and Conditions of Business and taking account of the resources devoted to it by agreement with the client.

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### Permanent Aviation Fuel Facility for Hong Kong International Airport

#### **Environmental Certification Sheet** EP-262/2007/B

#### Reference Document/Plan

Document/Plan to be Certified/ Verified:

Seventh Quarterly EM&A Report - Jul 2008 to Sep 2008

Date of Report:

17 October 2008

Date received by ET:

17 October 2008

Date received by IEC:

17 October 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/<del>plan</del> complies with the above referenced sections of the EM&A Manual recommendation

Craig A Reid, Environmental

Team Leader:

Date:

17 October 2008

#### **IEC Verification**

I hereby verify that the above referenced document/<del>plan</del> complies with the above referenced sections of the EM&A Manual recommendation

Dr Guiyi Li, Independent

Environmental Checker:

Date:

28 Oct 2008

Notes: EP-262/2007/B has replaced the former EP-262/2007/A, 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 9 July 2007. This **seventh** quarterly Environmental Monitoring and Audit (EM&A) report presents the EM&A work carried out during the period from **1 July** to **30 September 2008** in accordance with the *EM&A Manual*.

Breaches of all Action and Limit Levels

Exceedance of the Action Limit Level for Depth-averaged Dissolved Oxygen (DO) was found on 4, 8, 9, 10, 11 and 12 September 2008 while exceedance of the Action Limit Level for Bottom DO was found on 9, 10, 11 and 12 September 2008. Exceedance of Action Level of Suspended Solids was found on 4 and 18 September 2008. Following review of data in accordance with the procedures specified with the *EM&A Manual*, these exceedances were considered likely 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 dredging activities.

#### 1 INTRODUCTION

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 28<sup>th</sup> 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.

It should be noted that at the time of reporting, a further Variation to the Environmental Permit has been approved, primarily to allow for dredging works to continue during March 2008. As such, *EP-262/2007/A* has been amended to *EP-262/2007/B* and issued by the EPD on 27 February 2008.

The construction works and EM&A requirements resumed on 9 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 **seventh** EM&A Report which summarizes the monitoring results and audit findings for the EM&A programme during the reporting period from **1 July** to 30 **September 2008**.

### 1.2 KEY CONTACT INFORMATION

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

Table 1.1Contact 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) Con	struction Limit	ed					
Brian Gillon	Project Director	2823 1111	2529 8784	brian.gillon@leightonasia.com				
Boyd Merrett	t Project Manager	2404 8900	2404 0081	boyd.merrett@leightonasia.com				
Franchisee's	Site Representative	- ECO Aviation	Fuel Develo	pment Limited				
Philip Siu	Franchisee's Site Representative	2963 2820	2563 6311	philip.siu@towngas.com				
Environmen	tal Team – ERM-Hoi	ng Kong Limite	d					
Craig Reid	Environmental Team Leader	2271 3000 2723 5660 craig.reid@erm.com		craig.reid@erm.com				
Independent Environmental Checker - Hyder Consulting Limited								
Dr Kwok- Independent 2911 2233 2805 5028 KwokLeung.Pun@hyderconsulting.co leung Pun Environmental Checker								

#### 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*. Dredging operation has been suspended from 1 April to 31 August 2008 and was resumed on 1 September 2008. *Table 2.2* presented the cumulative quantity of excavated materials up to 30 September 2008. Daily and cumulative dredging production rates are illustrated in *Figure 2.1*.

#### Table 2.1 Summary of Works Undertaken During the Reporting Period

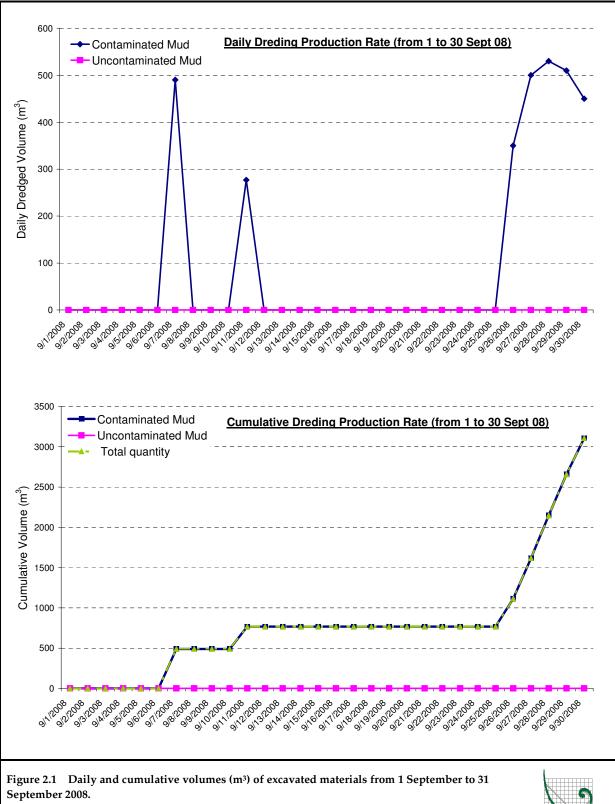
Area	Works undertaken
Tuen Mun Area 38	Tank Farm and Bund Wall Construction
	Permanent Drainage Construction
	Operational & Fire Services Buildings Construction
	Jetty Works (Non-piling)
Submarine Pipeline Route	Dredging Operations

#### Table 2.2 Cumulative Quantity of Excavated Materials up to 30 September 2008

Type of Excavated Materials	Cumulative Bulk Volume (m³)				
From 17 December 2007 to 31 March 2008					
Contaminated Mud	105,974				
Uncontaminated Mud	97,815				
From 1 September to 30 September 2008					
Contaminated Mud	3,107				
Uncontaminated Mud	0				

#### 2.4 MONITORING SCHEDULE OF THE REPORTING PERIOD

Daily water quality monitoring during dredging activities (except public holidays and weekends) recommenced on 1 September 2008. The monitoring schedule conducted in September 2008 is presented in *Annex C*.





Ref: 0018105\_Figure 2.1\_dredging volume.doc

#### 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* **2.3**.

Table 2.2 Summary of Environmental Licensing, Notification and Permit Status

Permit/ Licenses/ Notification	Reference	Validity Period	Remarks
Environmental Permit	EP-262/2007/B	Throughout Project	Issued on 27 February 2008 ( <i>EP</i> -262/2007/A on 30 November 2007, <i>EP</i> -262/2007 issued on 31 May 2007, <i>EP</i> -139/2002 originally granted on 28 August 2002 and <i>EP</i> -139/2002/A granted on 24 February 2004 were superseded)
Chemical Waste Producer Registration	WPN 5111-421-L2174- 25	Throughout Project	Issued on 10 November 2005
Notification of Construction Works under Air Pollution Control (Construction Dust) Regulation	H2104/U1D/5542/DG/ DH/PL	Throughout Project	Notification on 6 July 2007
Construction Noise Permit	GW-RW0676-07	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
	GW-RW0677-07	21 December 2007 to 29 February 2008	For marine dredging operation including grab dredger, tug boat, split hopper barge and motor sampan
	GW-RW0678-07	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
	GW-RW0094-08	1 March to 31 March 2008	For marine dredging operation including grab dredger, tug boat, split hopper barge and motor sampan

Permit/ Licenses/ Notification	Reference	Validity Period	Remarks
Notification	GW-RW0312-08	04 July 2008 to 22 December 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
	GW-RW0313-08	04 July 2008 to 19 December 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
	GW-RW0373-08	1 August 2008 to 20 January 2009	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, generators, stirrer, jet chisel, water jet machine and dehumidifier
	GW-RW0368-08	1 September to 30 November 2008	For marine dredging operation including grab dredger, tug boat, split hopper barge and motor sampan
Marine Dumping Permit	EP/MD/08-064	13 December 2007 to 29 February 2008	For Type 1 – Open Sea Disposal
	EP/MD/08-065	13 December 2007 to 12 January 2008	For Type 1d & Type 2 marine disposal
	EP/MD/08-071	13 January 2008 to 12 February 2008	For Type 1d & Type 2 marine disposal
	EP/MD/08-090	3 March to 31 March 2008	For Type 1d & Type 2 marine disposal
	EP/MD/08-091	3 March to 31 March 2008	For Type 1 – Open Sea Disposal
	EP/MD/09-018	1 September to 30 September 2008	For Type 1d & Type 2 marine disposal

Permit/ Licenses/ Notification	Reference	Validity Period	Remarks
	EP/MD/09-032	1 October to 31 October 2008	For Type 1d & Type 2 marine disposal
	EP/MD/09-017	1 September to 30 November 2008	For Type 1 - Open Sea Disposal
Wastewater Discharge License	EP760/421/011399/l	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 month, a meeting was organised by the CLG on 10 September 2008. The details of the 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

Water quality monitoring during dredging activities recorded exceedances of the Action Limit Level for Depth-averaged Dissolved Oxygen (DO) on 4, 8, 9, 10, 11 and 12 September 2008. There were exceedances of the Action Limit Level for Bottom DO on 9, 10, 11 and 12 September 2008. Exceedance of Action Level of Suspended Solids was found on 4 and 18 September 2008. A description of the actions taken following these non-compliances is discussed in *Section 3.2*.

#### 2.8 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*.

#### 2.9 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 4, 10, 18, and 24 July 2008, 1, 8, 15, and 29 August 2008, and 5, 12, 18, and 26 September 2008. Overall, the site was in good orderly manner and no non-compliances were 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		
July 2008	Chemical waste storage area was	Contractor arranged chemical		
	observed to be full.	waste collection.		
	General waste skips were observed to be full near the oil pumping facility and the operation building.	Contractor arranged more frequent collection of general wastes.		
	Stagnant water pools were observed at some locations on site.	Contractor arranged clearance of stagnant water pools.		
	Oil sheens were observed on the ground in the workshop and near the diesel storage tank.	Contractor arranged clearance of oil sheens and provided spillage control measures.		
August 2008	Stagnant water pools were observed at some locations on site.	Contractor arranged clearance of stagnant water pools.		
	Tank wall preparatory works were observed to be generating excessive dust without mitigation measures.	Contractor provided enclosure around dust generating works to minimize dust impact.		
	Dry soil materials were piled up near the surcharge area and near the operation building.	Contractor implemented water spraying to control wind erosion.		
	Sediment plume was observed at discharge sewer in the surcharge area.	Contractor adopted practice to settle muddy water in sedimentation tank prior to discharge.		
	General waste skips were observed to be full near the tank farms and the operation building.	Contractor arranged more frequent collection of general wastes.		
	Some chemical wastes were not properly labelled.	Contractors put suitable labels onto chemical waste containers.		

Reporting Month	Observation	Follow-up Action			
	Oil sheens were observed on ground near the tank farms. Temporary storage of oil products and chemical wastes were not provided with drip trays.	Contractor cleared oil sheens and implemented spillage control measures.			
September 2008	Silt curtains were not properly installed in the dredging area.	Contractor checked and ensured silt curtains were properly installed prior to commencement of future dredging activities.			
	Sediment plumes were observed on the rear end of hopper barge.	Contractor stopped dredging activities, investigated the cause of sediment plumes and ensured no further leakages of sediments from barge.			
	Sediment plumes were observed in the marine area near the water discharge outlet.	Contractor checked efficiency of sedimentation facilities and reviewed effluent discharge arrangements.			
	Oil sheens were observed on the sea surface near the operation building.	Contractor arranged clearance of oil sheens.			
	General waste skips were observed to be full near the tank farms and the operation building.	Contractor arranged more frequent collection of general wastes.			
	Chemical wastes on the hopper barge were not stored with spillage preventive measures.	Contractor transported chemical wastes to bunded areas on the barge.			
	Oil sheens were observed on the ground near the workshop. Temporary storage of oil products and chemical wastes were not provided with drip trays.	Contractor cleared oil sheens and implemented spillage control measures.			
	General wastes were piled up on the ground near the operation building.	Contractor provided waste skips for collection of general wastes produced.			

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 exceedances of the Action Limit Level for Depth-averaged Dissolved Oxygen (DO) on 4, 8, 9, 10, 11 and 12 September 2008. There were exceedances of the Action Limit Level for Bottom DO on 9, 10, 11 and 12 September 2008. Exceedance of the Action Level of Suspended Solids was found on 4 and 18 September 2008. Details of exceedance were presented in the monitoring results as *Annex G*.

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 the Action Limit Level for depth-averaged DO was found on 8 September when no dredging was undertaken. These values were comparable to those of days with dredging operations; and,
- Depth-averaged Turbidity did not show the same trend of exceedances indicating no potential relationship to a sediment plume generated by dredging activities.

The exceedance was hence considered to be isolated case and may likely be due to the regional natural fluctuation.

As per the requirements of the *EM&A Manual*, the incident was 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*.

#### Dissolved Oxygen

During impact monitoring, depth-averaged DO and bottom DO levels at all stations are generally comparable with those levels recorded during the baseline monitoring. It is noted that there appeared to be a decreasing trend in both DO levels at Impact Stations between 8 and 12 September, however, as this pattern was also observed in both upstream and control stations, it is considered unlikely that these levels are attributable to Project works.

#### Suspended Solids

During impact monitoring on the flood tide, SS levels at all stations were found to be generally comparable with those recorded during the baseline monitoring. An exception was noted on 4 and 18 September 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 but rather isolated events. Furthermore, it is noted that upstream Control Station C2 also recorded similar high levels on 5 September at mid ebb, indicating potentially natural fluctuations.

Based on the above, it is likely that the waters in the vicinity of the works site are influenced by other factors, such as natural fluctuations of DO and SS observed in the Pearl River Estuary.

#### 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 AIR AND NOISE

Air and Noise monitoring was not required for the project.

#### 4.2 WATER QUALITY

In accordance to the EM&A Manual water quality monitoring recommenced on 1 September 2008 alongside dredging activities. 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 turbidity levels of all Impact Stations were compliant with the Action and Limit (AL) Levels specified in the EM&A Manual. Exceedance of the Action Limit Levels for Depth-averaged Dissolved Oxygen (DO) was found on 4, 8, 9, 10, 11 and 12 September 2008 while exceedance of the Action Limit Levels for Bottom DO was found on 9, 10, 11 and 12 September 2008. Exceedance of the Action Level of Suspended Solids was found on 4 and 18 September 2008. 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).

#### 4.3 POPS MONITORING

Biweekly monitoring of POPs in water samples was conducted on 3 and 17 September. All POPs parameters (ie total PCBs, total DDTs and total PAHs) were below detection limits. Monitoring results and QA/QC reports for POPs testing are presented in *Annex H*.

#### 4.4 WASTE MANAGEMENT

The Contractor's revised Waste Management Plan (Revision 4) (WMP) was submitted to EPD on 20 September 2007. Pursuant to EP *Condition 3.3*, the Contractor submitted the updated and revised WMP (Revision 5) to the ET. The revised WMP has been certified by the ET and IEC.

#### 4.5 CULTURAL HERITAGE

The *Watching Brief Report*, verified by the Independent Environmental Checker, was submitted to the EPD and AMO on 9 May 2008.

#### 4.6 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 condition.

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

#### 4.7 LAND CONTAMINATION, HAZARD TO LIFE AND FUEL SPILL RISK

The ET and IEC verified updated design audit plan was submitted to the EPD on 7 November 2007.

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

#### 4.8 ECOLOGY

Dolphin Visual Monitoring

In accordance with *EM&A Manual*, dolphin monitoring has been undertaken during dredging activities since 1 September 2008. During the reporting period, a total of 11 dolphin sightings were recorded. Appropriate action was taken in accordance with the *EM&A Manual*. The sighting locations and field records are presented in *Annex I*.

#### 4.9 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 (POPs) during construction of the Project. No further actions regarding the *EM&A manual* were required during the reporting period.

#### 4.10 BASELINE WATER QUALITY MONITORING

The *Final Baseline Monitoring Report* was submitted to the EPD on 20 February 2008 and placed under the EIAO register.

#### 5 FUTURE KEY ISSUES AND CONCLUSION

#### 5.1 KEY ISSUES FOR THE NEXT REPORTING PERIOD

Key issues to be considered in the next one month will be:

- 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 Dissolved Oxygen 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.

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

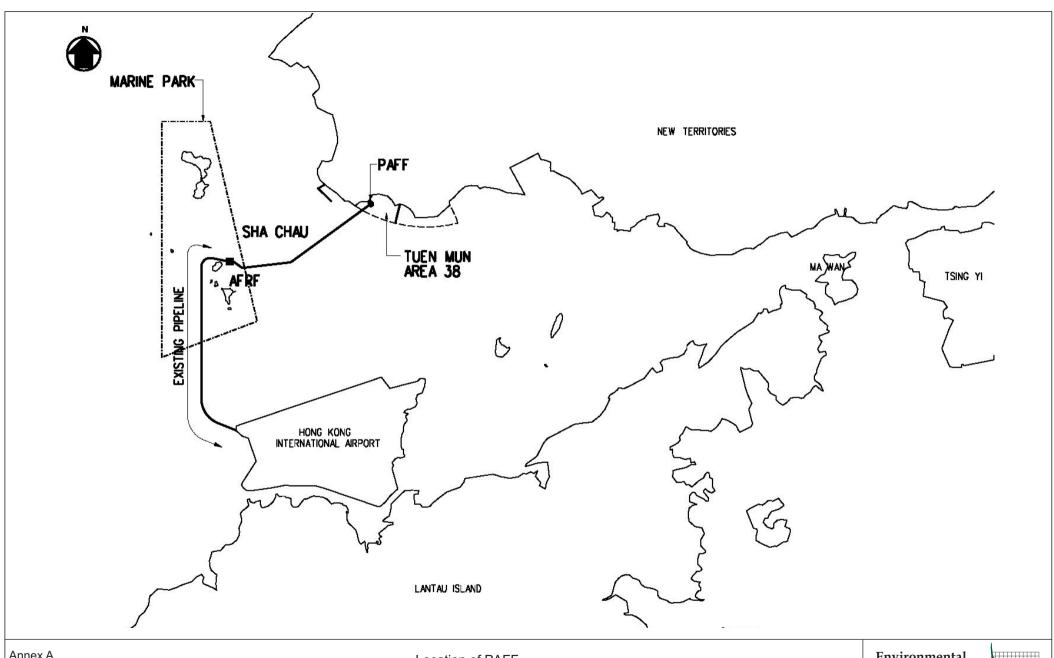
Work programme for the next reporting period includes jetty platform works (non-piling), site works (construction works for tank farm, operational and fire services buildings, pump platform, drainages, bund wall, security wall etc) and dredging operation. Weekly site inspections will be undertaken in 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

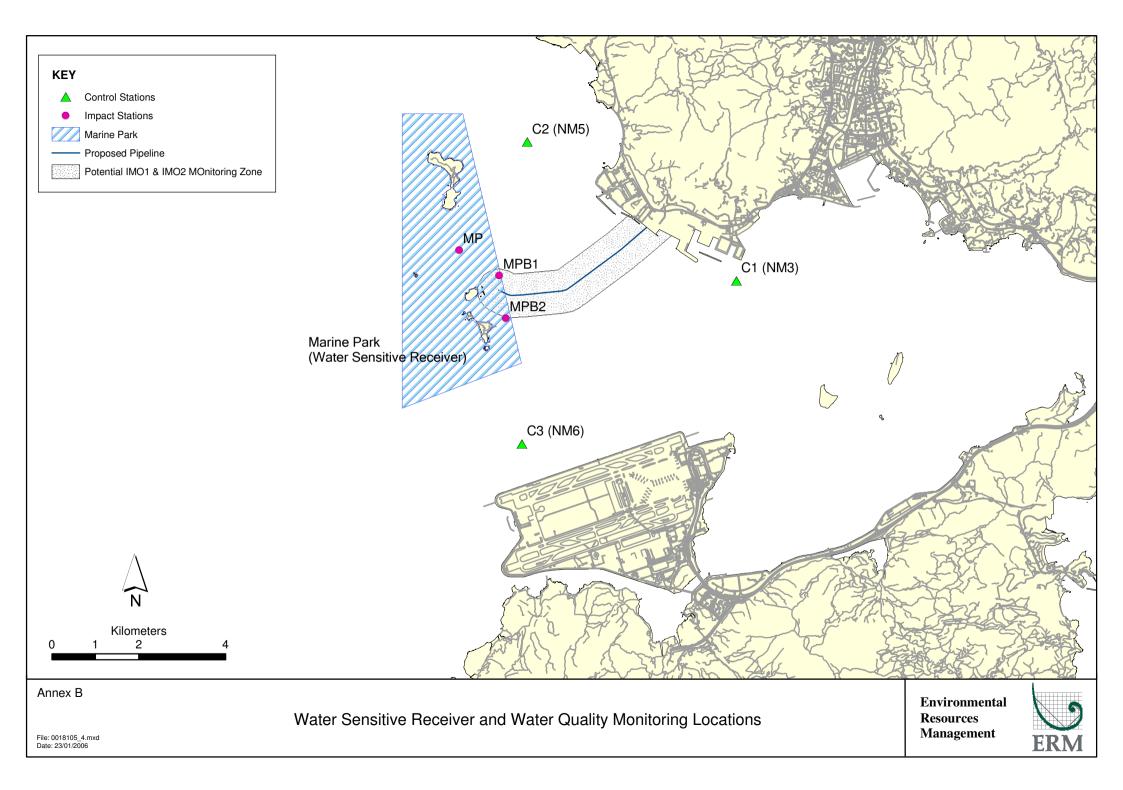
Location of PAFF

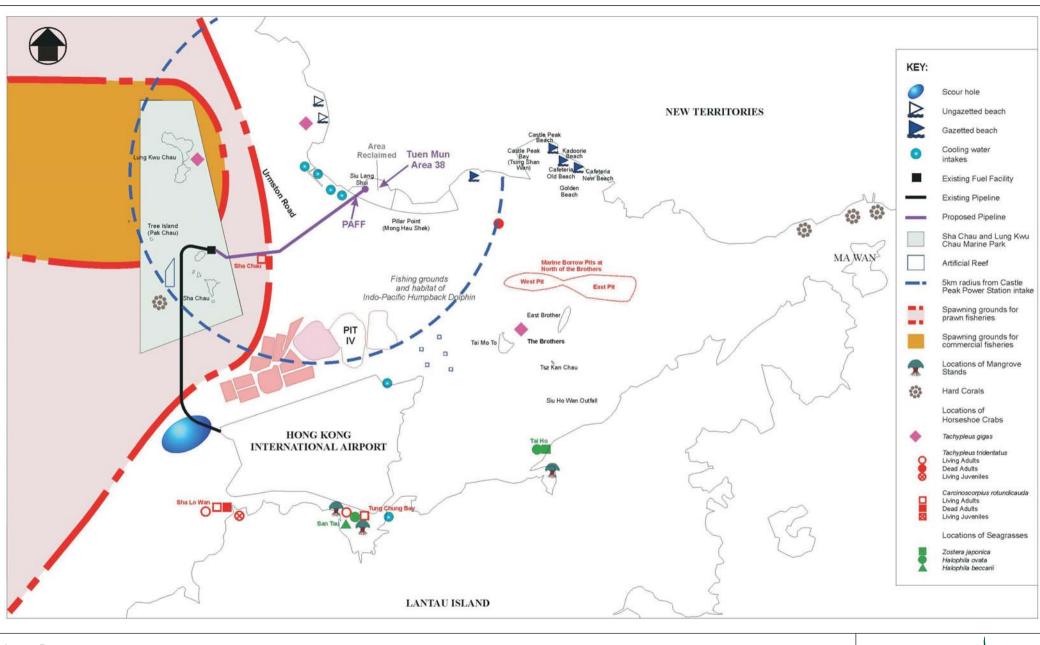
**Environmental** Resources Management



#### Annex B

Water Quality Monitoring Stations, Water Quality and Ecological Sensitive Receivers





Annex B

FILE: C2475aa

DATE: 12/11/2007

Water Quality and Ecological Sensitive Receivers

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

Environmental Resources Management



#### Annex C

Monitoring Schedule for the Reporting Period and Next Month

PAFF
Tentative Impact Water Quality Monitoring Schedule for September 2008

Sunday	ay Monday		Tueso	day	Wednesday		Thursday		Friday		Saturday
		01-Sep		02-Sep		03-Sep		04-Sep		05-Sep	06-Sep
					POP sa	mpling					
	Mid-Ebb	14:02	Mid-Flood	08:12	Mid-Flood	08:52	Mid-Flood	09:34	Mid-Flood	10:21	
	Mid-Flood	20:21	Mid-Ebb	14:33	Mid-Ebb	15:02	Mid-Ebb	15:30	Mid-Ebb	16:02	
07-Sep		08-Sep		09-Sep		10-Sep		11-Sep		12-Sep	13-Sep
	Mid-Ebb	06:57	Mid-Ebb	08:16	Mid-Ebb	09:20	Mid-Ebb	10:16	Mid-Ebb	11:03	
	Mid-Flood	19:31	Mid-Flood	20:55	Mid-Flood	21:58	Mid-Flood	18:04	Mid-Flood	18:22	
14-Sep		15-Sep		16-Sep		17-Sep		18-Sep		19-Sep	20-Sep
					POP sa						
	Mid-Ebb	12:56	Mid-Ebb	13:29	Mid-Ebb	14:03	Mid-Ebb	14:39	Mid-Flood	09:35	
	Mid-Flood	19:21	Mid-Flood	19:41	Mid-Flood	20:06	Mid-Flood	20:32	Mid-Ebb	15:18	
21-Sep		22-Sep		23-Sep		24-Sep		25-Sep		26-Sep	27-Sep
	Mid-Ebb		Mid-Ebb	07:02	Mid-Flood		Mid-Ebb	09:54	Mid-Ebb	10:51	
	Mid-Flood		Mid-Flood		Mid-Ebb	22:04	Mid-Flood	17:23	Mid-Flood	17:51	
28-Sep		29-Sep		30-Sep							
	Mid-Ebb		Mid-Ebb	13:31							
	Mid-Flood	19:04	Mid-Flood	19:26							

## **Tentative Impact Water Quality Monitoring Schedule for October 2008**

Su	ınday	Monda	ay	Tueso	lay	Wednesda	У	Thurs	day	Friday		Satur	day
	28-Sep		29-Sep		30-Sep		01-Oct		02-Oct		03-Oct		04-Oct
						Mid-Ebb	14:02	Mid-Flood	8:46	Mid-Flood	9:28	Mid-Flood	10:18
						Mid-Flood	19:48	Mid-Ebb	14:33	Mid-Ebb	15:04	Mid-Ebb	15:37
	05-Oct		06-Oct		07-Oct		08-Oct		09-Oct		10-Oct		11-Oct
						(POP sampling)							
Mid-Ebb	11:22	Mid-Ebb	4:48	Mid-Ebb	5:44	Mid-Ebb	6:58	Mid-Flood	16:57	Mid-Ebb	9:24	Mid-Ebb	10:17
Mid-Flood	16:09	Mid-Flood	17:06	Mid-Flood	18:13	Mid-Flood	19:48	Mid-Ebb	22:16	Mid-Flood	17:05	Mid-Flood	17:24
	12-Oct		13-Oct		14-Oct		15-Oct		16-Oct		17-Oct		18-Oct
Mid-Ebb	11:02	Mid-Ebb	11:42	Mid-Ebb	12:21	Mid-Ebb	13:00	Mid-Ebb	13:40	Mid-Ebb	8:47	Mid-Flood	9:48
Mid-Flood	17:44	Mid-Flood	18:02	Mid-Flood	18:25	Mid-Flood	18:51	Mid-Flood	19:20	Mid-Flood	14:22	Mid-Ebb	15:09
	19-Oct		20-Oct		21-Oct		22-Oct		23-Oct		24-Oct		25-Oct
						(POP sampling)							
Mid-Flood	10:54	Mid-Flood	12:08	Mid-Ebb	5:26	Mid-Ebb	6:41	Mid-Flood	16:02	Mid-Ebb	9:28	Mid-Ebb	10:24
Mid-Ebb	15:57	Mid-Ebb	16:41	Mid-Flood	18:04	Mid-Flood	19:44	Mid-Ebb	21:47	Mid-Flood	16:34	Mid-Flood	17:01
	26-Oct		27-Oct		28-Oct		29-Oct		30-Oct		31-Oct		01-Nov
			•								•		
Mid-Ebb	11:10	Mid-Ebb	11:52	Mid-Ebb	12:30	Mid-Ebb	13:06	Mid-Ebb	13:40	Mid-Flood	14:13		
Mid-Flood	17:25	Mid-Flood	17:49	Mid-Flood	18:12	Mid-Flood	18:36	Mid-Flood	19:00	Mid-Ebb	19:23		

#### Annex D

# Cumulative Complaints Statistics

## Summary of Environmental Complaints

Reporting Period	Complaint Statistics								
	Frequency	Cumulative	Complaint Natur						
Before construction	1	1	Dust						
works									
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						
01/08/07 - 31/08/07 01/09/07 - 30/09/07	0	2 2	Nil Nil						
09/07/07 - 31/07/07	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						
01/12/07 - 31/12/07 01/01/08 - 31/01/08	0	2 2	Nil Nil						
01/12/07 - 31/12/07 01/01/08 - 31/01/08 01/02/08 - 29/02/08	0 0 0	2 2 2	Nil Nil Nil						
01/12/07 - 31/12/07 01/01/08 - 31/01/08 01/02/08 - 29/02/08 01/03/08 - 31/03/08	0 0 0 0	2 2 2 2	Nil Nil Nil Nil						
01/12/07 - 31/12/07 01/01/08 - 31/01/08 01/02/08 - 29/02/08 01/03/08 - 31/03/08 01/04/08 - 30/04/08	0 0 0 0 0	2 2 2 2 2	Nil Nil Nil Nil Nil						
01/12/07 - 31/12/07 01/01/08 - 31/01/08 01/02/08 - 29/02/08 01/03/08 - 31/03/08 01/04/08 - 30/04/08 01/05/08 - 31/05/08	0 0 0 0 0 0	2 2 2 2 2 2 2	Nil Nil Nil Nil Nil Nil						
01/12/07 - 31/12/07 01/01/08 - 31/01/08 01/02/08 - 29/02/08 01/03/08 - 31/03/08 01/04/08 - 30/04/08 01/05/08 - 31/05/08 01/06/08 - 30/06/08	0 0 0 0 0 0	2 2 2 2 2 2 2 2	Nil Nil Nil Nil Nil Nil Nil						
01/12/07 - 31/12/07 01/01/08 - 31/01/08 01/02/08 - 29/02/08 01/03/08 - 31/03/08 01/04/08 - 30/04/08 01/05/08 - 31/05/08 01/06/08 - 30/06/08 01/07/08 - 31/07/08	0 0 0 0 0 0 0	2 2 2 2 2 2 2 2 2	Nil Nil Nil Nil Nil Nil Nil						
01/12/07 - 31/12/07 01/01/08 - 31/01/08 01/02/08 - 29/02/08 01/03/08 - 31/03/08 01/04/08 - 30/04/08	0 0 0 0 0 0	2 2 2 2 2 2 2 2	Nil Nil Nil Nil Nil Nil Nil						

## Summary of Environmental Summons

Reporting Period	<b>Environmental Summons</b>								
_	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						
09/07/07 - 31/07/07 01/08/07 - 31/08/07	0	0 0	Nil Nil						
Re-commencement of con	struction works on 9th	July 2007							
01/08/07 - 31/08/07									
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						
01/01/08 - 31/01/08	0	0	Nil						
01/02/08 - 29/02/08	0	0	Nil						
01/03/08 - 31/03/08	0	0	Nil						
01/04/08 - 30/04/08	0	0	Nil						
01/05/08 - 31/05/08	0	0	Nil						
01/06/08 - 30/06/08	0	0	Nil						
01/07/08 - 31/07/08	0	0	Nil						
01/08/08 - 31/08/08	0	0	Nil						
01/09/08 - 30/09/08	0	0	Nil						

#### Annex E

Implementation Programme of Mitigation Measures

#### ANNEX E IMPLEMENTATION SCHEDULE

EIA Reference	EM&A Manual Reference	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	In D	ementation chedule C O	Maintenance Agency	Implementation Status
Water Qua	lity				<u>.</u>				
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	On going
6.7	6.8.1	No hydraulic dredging within Marine Park.	Marine Park / Pipeline Dredging	Contractor	TMEIA		Y	N/A	Completed
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	On going
6.4		The work rate for dredging should not exceed 4,000 m <sup>3</sup> /hr for the TSHD and 7,000 m <sup>3</sup> /day for the grab dredger.	Marine Park / Pipeline Dredging	Contractor	TMEIA		Y	N/A	On going
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	On going
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	Not applicable
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	On going
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	On going

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or	In	-	ment	tation		Implementation Status
Reference	Reference		Timing	Agent	Requirement	D	30	C	O	Agency	
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	Not applicable
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	On going
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	On going
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	On going
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	On going
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

EIA	EM&A	<b>Environmental Protection Measures</b>	Location/	Implementation	Relevant	In	-	nenta			Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D		i <mark>edule</mark> C	O	Agency	Status
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	<u> </u>		Y	<u> </u>	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 onsite 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
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

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or	In	Implementation Schedule			Maintenance Agency	Implementation Status
	Reference		8	<i>8</i> -	Requirement	D C O	87				
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) o nsite 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
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

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or	In	-	mentation hedule	Maintenance Agency	Implementation Status
	Reference			_	Requirement	D		C O		
6.7	6.8.1	All vehicles and plant should be cleaned	Land site/	Contractor	TMEIA			Y	N/A	Ongoing
		before they leave the construction site to	Throughout		ProPECC Note					
		ensure that no earth, mud or debris is	construction		1/94. WPCO					
		deposited by them on roads. A wheel	period		TM on Effluent					
		washing bay should be provided at every site exit.			Standards					
6.7	6.8.1	Wheel wash overflow shall be directed to	•	Contractor	TMEIA			Y	N/A	Ongoing
		silt removal facilities before being	Throughout		ProPECC Note					
		discharged to the storm drain.	construction		1/94. WPCO					
			period		TM on Effluent					
					Standards					
6.7	6.8.1	The section of construction road between	•	Contractor	TMEIA			Y	N/A	Ongoing
		the wheel washing bay and the public	Throughout		ProPECC Note					
		road should be surfaced with crushed	construction		1/94. WPCO					
		stone or coarse gravel.	period		TM on Effluent					
				_	Standards					
6.7	6.8.1	Wastewater generated from concreting,	Land site/	Contractor	TMEIA			Y	N/A	Ongoing
		plastering, internal decoration, cleaning	Throughout		ProPECC Note					
		work and other similar activities, shall be			1/94. WPCO					
		screened to remove large objects.	period		TM on Effluent					
		*****	T 1 /		Standards			3./	NT / A	
6.7	6.8.1	Vehicle and plant servicing areas, vehicle		Contractor	TMEIA			Y	N/A	Ongoing
		wash bays and lubrication facilities shall	Throughout		ProPECC Note					
		be located under roofed areas. The	construction		1/94. WPCO					
		drainage in these covered areas shall be	period		TM on Effluent					
		connected to foul sewers via a petrol			Standards					
		interceptor in accordance with the								
		requirements of the WPCO or collected								
6.7	6.8.1	for off site disposal. The contractors shall prepare	Land site/	Contractor	TMEIA			Y	N/A	Ongoing
0.7	0.0.1	oil/chemical cleanup plan and ensure	Throughout	Contractor	ProPECC Note			1	IN/ A	Ongoing
		that leakages or spillages are contained	construction		1/94. WPCO					
		and cleaned up immediately.	period		TM on Effluent					
		and cleaned up mimediatery.	periou		Standards					
					Januarus					

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or		Sch	entatior edule	Maintenance Agency	Implementation Status
6.7	Reference 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	Requirement TMEIA ProPECC Note 1/94. WPCO TM on Effluent	D	)		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	Standards TMEIA ProPECC Note 1/94. WPCO TM on Effluent Standards		Ŋ		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		Ŋ		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.	U	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	Ŋ		Franchisee	On going
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			Υ	Franchisee	Pending

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or	In	-	ementa chedul		Maintenance Agency	Implementation Status
	Reference				Requirement	D		C	О		
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	On going
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	On going
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	On going
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	On going
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	On going

EIA Reference	EM&A Manual Reference	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	In D	nplementat Schedule C		Maintenance Agency	Implementation Status
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	Ongoing
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	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

EIA Reference	EM&A Manual	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or	Im	plemer Sched		Maintenance Agency	Implementation Status
	Reference		J	J	Requirement	D	C	O	3 )	
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/throug hout dredging in Marine Park and along the length of pipeline	Contractor	TMEIA		Y		N/A	Ongoing
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	Ongoing
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	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or	Im	plement Schedu		Maintenance Agency	Implementation Status
	Reference		_	-	Requirement	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.	-	Project Proponent	TMEIA	Y	Y	Y	N/A	Ongoing

#### Cultural Heritage

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or		plement Schedu		Maintenance Agency	Implementation Status
Reference	Reference		Timing	Agent	Requirement	D	C	O	Agency	Status
9.8.1	9.2.1	Undertake a watching brief during dredging of the pipeline within 25m	Within vicinity of SS1 and SS2	Franchisee	TMEIA		Y		N/A	Ongoing

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;

either side of anomalies SS1 and SS2.

This should comprise:

 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 bought on deck for cleaning and examination; and,

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or		Schedu	1e	Maintenance Agency	Implementation Status
	Reference				Requirement	D	С	О		
		<ul> <li>Dredging to cease in the nominated area SS1 after 3 meters of sediment removal and after 1 metre for SS2.</li> <li>A dive survey will then be undertaken to examine the trench for possible cultural remains.</li> </ul>								
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	Ongoing
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	Ongoing
Fuel Spill I	Risk	1								
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	On going
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	On going
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	On going
11.4.1	10.2	Pipeline to be covered with a protective rock armour layer.	Pipelines/ Design Phase	Franchisee	TMEIA	Y			Franchisee	On going
11.4.1	10.2	An integrated leak detection system shall be installed to all pipelines to provide early detection of any leak.	0	Franchisee	TMEIA	Y			N/A	On going

EIA	EM&A	<b>Environmental Protection Measures</b>	Location/	Implementation	Relevant	Im	plem	nentation	Maintenance	Implementation
Reference	Manual		Timing	Agent	Standard or		Sche	edule	Agency	Status
	Reference				Requirement	D	C	<b>O</b>		
11.4.1	10.2	An automatic shut-off system shall be implemented for pipelines.	Pipelines/ Design Phase	Franchisee	TMEIA	Y			N/A	On going
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			Υ	N/A	Pending

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or	In	plement Schedu		Maintenance Agency	Implementation Status
Reference	Reference		1 mmig	Agent	Requirement	D	C	O	Agency	Status
11.6	10.4	Regular inspections and audits will be undertaken by the Franchisee during the operational phase of the facility:	Operation	Franchisee	TMEIA			Y	N/A	Pending
		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;								
		<ul> <li>Health, Safety and Environmental audit of the facility once every 3 years; and,</li> </ul>								
		• Inspection of the structural integrity of the tanks once per year.								
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.	the PAFF with	Franchisee	TMEIA			Y	N/A	Pending
Land Conta	amination									
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	On going
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	On going
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	On going
13.5.1	10.2	Impermeable lining shall be provided for all tank pits.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	On going

EIA Reference	EM&A Manual	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or	_	olement Schedul		Maintenance Agency	Implementation Status
	Reference				Requirement	D	C	O		
13.5.1	10.2	Leak detection systems shall be provided to all valves.	Tank farm / Design	Franchisee	TMEIA	Y			N/A	On going
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	On going
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 rood 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	On going
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	On going
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.		Franchisee	TMEIA	Y	Y	Y	N/A	On going
13.5.5	10.2	Tank overfill 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	On going
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	On going

EIA	EM&A	<b>Environmental Protection Measures</b>	Location/	Implementation	Relevant	Imp	lement	ation	Maintenance	Implementation
Reference	Manual		Timing	Agent	Standard or	9	Schedu	le	Agency	Status
	Reference				Requirement	D	C	O		
13.5.5	10.2	Drainage from areas of hardstanding	Tank farm /	Franchisee	TMEIA	Y	Y	Y	N/A	On going
		shall be treated by means of oil/water	Design							
		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.								
13.5.5	10.2	The delivery pipeline from the jetty and	Tank farm /	Franchisee	TMEIA	Y	Y		N/A	On going
		the supply line to the airport shall be	Design							
		fitted with pressure sensitive leak								
Marta Mara		detectors.								
Waste Man	U				TEN ATEL A		3/		NT / A	
14.7.2	8.3.1	The Contractor shall identify a coordinator for the management of	Contract mobilisation	Contractor	TMEIA		Y		N/A	Ongoing
		waste.	modifisation							
14.7.2	8.3.1	The waste coordinator shall prepare and	Contract	Contractor	TMEIA, Works		Y		N/A	Ongoing
14.7.2	0.3.1	implement a Waste Management Plan	mobilisation	Contractor	Branch		1		11/11	Origonig
		which specifies procedures such as	mobilisation		Technical					
		ticketing system, to facilitate tracking of			Circular No.					
		loads and to ensure that illegal disposal			5/99 for the					
		of waste does not occur, and protocols			Trip-ticket					
		for the maintenance of records of the			System for					
		quantities of wastes generated, recycled			Disposal of					
		and disposal.			Construction					
		-			and Demolition					
					Material					

EIA	EM&A	<b>Environmental Protection Measures</b>	Location/	Implementation	Relevant	Im	-	nentat		Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D		edule	O	Agency	Status
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		•	Ý		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		,	Ý		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	EM&A	<b>Environmental Protection Measures</b>	Location/	Implementation	Relevant	Im			Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	hedule C	o	Agency	Status
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 pubic fill stockpile in Mui Wo, North Lantau or Mui Wo refuse	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
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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	In D	-	emen chedu C	tation le O	Maintenance Agency	Implementation Status
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
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

EIA	EM&A	<b>Environmental Protection Measures</b>	Location/	Implementation		In	-	Maintenance	Implementation
Reference	Manual Reference		Timing	Agent	Standard or Requirement	D	Schedule C O	Agency	Status
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
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		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

EIA Reference	EM&A Manual Reference	Environmental Protection Measures	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	In D	nplementation Schedule C O	Maintenance Agency	Implementation Status
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
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

EIA Reference	EM&A Manual Reference	<b>Environmental Protection Measures</b>	Location/ Timing	Implementation Agent	Relevant Standard or Requirement	In D	nplementation Schedule C O	Maintenance Agency	Implementation Status
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
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:	•	Contractor	TMEIA		Y	N/A	Ongoing
		<ul><li>Clearly labelled;</li><li>Enclosed on at least 3 sides;</li></ul>	period						
		<ul> <li>Have impermeable floor and bunding sufficient to fully retain any spillage or leakages;</li> </ul>							
		• Ventilated; and,							
		Covered to prevent rainfall from entering.							
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 an 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	EM&A	<b>Environmental Protection Measures</b>	Location/	Implementation	Relevant	Im	Implementation		Maintenance	Implementation				
Reference	Manual		Timing	Agent	Standard or		Schedule		Schedule		Schedule		Agency	Status
	Reference				Requirement	D	C	O						
14.7.2	8.3.1	EM&A of waste handling, storage,	All areas/	Contractor	TMEIA		Y		N/A	Ongoing				
Section 5		transportation, disposal procedures and	throughout											
		documentation through the site audit	construction											
		programme shall be undertaken.	period											

#### Annex F

QA/QC Results for Laboratory Testing of Suspended Solids

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES

#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page : 1 of 4

Contact : MS KAREN LUI Contact : Wong Wai Man, Alice Work Order : HK0813876

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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : ---- Date received : 01-SEP-2008

FACILITY

Order number : ---- Date of issue : 04-SEP-2008

C-O-C number : ---- No. of samples - Received : 52

Site : --- - - Analysed : 52

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0813876 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0813876: Sample(s) were collected by ALS Technichem (HK) staff on 01 September, 2008.

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.

Approval from ALS Technichem (HK) Pty Ltd.

Flectronic signing has been carried out in compliance with procedures specified in the 'Flectronic Transactions Ordinance'

Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance'

of Hong Kong. Chapter 553. Section 6.

Signatory Position Authorised results for:-

: 4 of 4

Client

: ERM HONG KONG

Work Order

HK0813876

#### Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	ratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	Aggregate Properties (Q	C Lot: 746125)						
HK0813876-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	7	7	0.0
HK0813876-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0
EA/ED: Physical and	Aggregate Properties (Q	C Lot: 746126)						
HK0813876-047	C2 (NM5) B ME	EA025: Suspended Solids (SS)		1	mg/L	6	5	17.5
HK0813876-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	9	9	0.0
EA/ED: Physical and	Aggregate Properties (Q	C Lot: 746127)						
HK0813876-091	C1 (NM3) S MF	EA025: Suspended Solids (SS)		1	mg/L	12	11	8.6
HK0813876-102	C3 (NM6) B DUP MF	EA025: Suspended Solids (SS)		1	mg/L	5	4	0.0

## Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MI	B) Report		Laboratory Control	Spike (LCS) and Labora	tory Control S	pike Duplicat	e (DCS) Report	
					Spike	Spike Re	covery (%)	Recovery	Limits (%)	RPD	Os (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (C	QCLot: 746125)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	108		85	115		
EA/ED: Physical and Aggregate Properties (C	QCLot: 746126)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	100		85	115		
EA/ED: Physical and Aggregate Properties (C	QCLot: 746127)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	100		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page : 1 of 5

Contact : MS KAREN LUI : Wong Wai Man, Alice Work Order : LIMO

Contact : MS KAREN LUI Contact : Wong Wai Man, Alice Work Order : HK0813886

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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : ---- Date received : 02-SEP-2008

: EM&A FOR THE PERMANENT AVIATION FUEL Quote number : -FACILITY

Order number : ---- Date of issue : 05-SEP-2008

C-O-C number : --- No. of samples - Received : 72

Site : --- - Analysed : 72

#### **Report Comments**

E-mail

This report for ALS Technichem (HK) Pty Ltd work order reference HK0813886 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0813886 : Sample(s) were collected by ALS Technichem (HK) staff on 02 September, 2008.

Water sample(s) analysed and reported on an as received basis.

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of Hong Kong. Chapter 553. Section 6.

Signatory Position Authorised results for:-

: 5 of 5

Client

: ERM HONG KONG

Work Order

HK0813886



#### Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	ratory Duplicate (DUP) F	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties (QC	C Lot: 747384)						
HK0813886-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	8	8	0.0
HK0813886-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	8	8	0.0
EA/ED: Physical and	d Aggregate Properties (QC	Lot: 747385)						
HK0813886-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	14	16	14.0
HK0813886-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	9	8	21.6
EA/ED: Physical and	d Aggregate Properties (QC	C Lot: 747386)						
HK0813886-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	5	4	28.1
HK0813886-066	MPB2 B DUP MF	EA025: Suspended Solids (SS)		1	mg/L	34	34	0.0
EA/ED: Physical and	d Aggregate Properties (QC	C Lot: 747387)						
HK0813886-091	C1 (NM3) S MF	EA025: Suspended Solids (SS)		1	mg/L	7	6	0.0
HK0813886-094	C1 (NM3) M DUP MF	EA025: Suspended Solids (SS)		1	mg/L	10	11	11.6

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	3) Report		Laboratory Control S	pike (LCS) and Laborate	ory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCL	_ot: 747384)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	109		85	115		
EA/ED: Physical and Aggregate Properties (QCL	_ot: 747385)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	110		85	115		
EA/ED: Physical and Aggregate Properties (QCL	_ot: 747386)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	108		85	115		
EA/ED: Physical and Aggregate Properties (QCL	_ot: 747387)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	104		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

#### ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page : 1 of 4

Contact : MS KAREN LUI : Wong Wai Man, Alice Work Order : LIMIN

Contact : MS KAREN LUI Contact : Wong Wai Man, Alice Work Order : HK0813887

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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : ---- Date received : 03-SEP-2008

FACILITY

Order number : ---- Date of issue : 08-SEP-2008

C-O-C number : ---- No. of samples - Received : 70

Site : --- - Analysed : 70

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0813887 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0813887 : 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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Signatory Position Authorised results for:-

: 4 of 4

Client

: ERM HONG KONG

Work Order HK0813887



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Lab	oratory Duplicate (DUP) I	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 748494)						
HK0813887-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	8	7	16.0
HK0813887-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 748495)						
HK0813887-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0
HK0813887-047	C2 (NM5) B ME	EA025: Suspended Solids (SS)		1	mg/L	8	7	15.4
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 748496)						
HK0813887-059	MPB1 B MF	EA025: Suspended Solids (SS)		1	mg/L	9	10	17.1
HK0813887-069	IMO1 M MF	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 748497)						
HK0813887-093	C1 (NM3) M MF	EA025: Suspended Solids (SS)		1	mg/L	7	7	0.0

## Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MI	3) Report		Laboratory Control S	pike (LCS) and Laborat	ory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot	t: 748494)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	90.5		85	115		
EA/ED: Physical and Aggregate Properties (QCLot	t: 748495)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	89.0		85	115		
EA/ED: Physical and Aggregate Properties (QCLot	t: 748496)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	88.5		85	115		
EA/ED: Physical and Aggregate Properties (QCLor	t: 748497)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	110		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

#### ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page : 1 of 5

Contact : MS KAREN LUI Contact : Wong Wai Man, Alice Work Order : HK0813888

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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : ---- Date received : 04-SEP-2008

FACILITY

Order number : ---- Date of issue : 09-SEP-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 HK0813888 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0813888: 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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of Hong Kong. Chapter 553. Section 6.

Signatory Position Authorised results for:-

: 5 of 5

Client

: ERM HONG KONG

Work Order

HK0813888



## Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 749598)									
HK0813888-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	4	5	0.0			
HK0813888-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	4	5	0.0			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 749599)									
HK0813888-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	47	47	0.0			
HK0813888-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	7	8	0.0			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 749600)									
HK0813888-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	14	14	0.0			
HK0813888-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 749601)									
HK0813888-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	62	59	4.0			
HK0813888-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0			

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	B) Report		Laboratory Control S	pike (LCS) and Laborate	ory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLc	ot: 749598)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	89.5		85	115		
EA/ED: Physical and Aggregate Properties (QCLc	ot: 749599)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	90.0		85	115		
EA/ED: Physical and Aggregate Properties (QCLc	ot: 749600)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	91.5		85	115		
EA/ED: Physical and Aggregate Properties (QCLc	ot: 749601)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	101		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory
Contact : MS KAREN LUI Contact

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Project : EM&A FOR THE PERMANENT AVIATION FUEL

**FACILITY** 

Order number : ----

Address

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Quote number : ----

E-mail

Date received : 05-SEP-2008

Page

Work Order

Date of issue : 10-SEP-2008

No. of samples - Received : 74

: 1 of 5

HK0813889

Analysed :

74

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0813889 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0813889:

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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Signatory Position

Fung Lim Chee, Richard Gene

General Manager

Inorganics

Authorised results for:-

: 5 of 5

Client : ERM HONG KONG

Work Order

HK0813889



## Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 750937)										
HK0813889-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	5	4	0.0				
HK0813889-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 750938)										
HK0813889-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	23	23	0.0				
HK0813889-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	8	8	0.0				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 750939)										
HK0813889-049	MP S MF	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0				
HK0813889-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 750940)										
HK0813889-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	18	19	8.3				
HK0813889-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	10	9	12.7				

## Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	3) Report		Laboratory Control S	pike (LCS) and Laborate	ory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCL	_ot: 750937)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	104		85	115		
EA/ED: Physical and Aggregate Properties (QCL	_ot: 750938)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	107		85	115		
EA/ED: Physical and Aggregate Properties (QCL	_ot: 750939)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115		
EA/ED: Physical and Aggregate Properties (QCL	_ot: 750940)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	89.0		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

#### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Contact

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Proiect : EM&A FOR THE PERMANENT AVIATION FUEL

**FACILITY** 

Order number : ----

Site

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Quote number

Laboratory

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· 08-SEP-2008 Date received

Page

Work Order

11-SEP-2008 Date of issue

No. of samples Received 74

: 1 of 5

HK0813890

74 Analysed

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0813890 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0813890:

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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Signatory Position Authorised results for:-

: 5 of 5

Client

: ERM HONG KONG

Work Order

HK0813890

## Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 752315)										
HK0813890-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0				
HK0813890-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	4	5	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 752316)										
HK0813890-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	5	5	0.0				
HK0813890-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	4	3	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 752317)										
HK0813890-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0				
HK0813890-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	5	6	20.1				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 752318)										
HK0813890-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	4	5	26.6				
HK0813890-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0				

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	3) Report		Laboratory Control S	pike (LCS) and Laborate	ory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC	Lot: 752315)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	104		85	115		
EA/ED: Physical and Aggregate Properties (QC	Lot: 752316)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	106		85	115		
EA/ED: Physical and Aggregate Properties (QC	Lot: 752317)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	101		85	115		
EA/ED: Physical and Aggregate Properties (QC	Lot: 752318)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	90.5		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

#### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES

#### **CERTIFICATE OF ANALYSIS**

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Date received

· 09-SEP-2008

HK0814211

: 1 of 5

Date of issue No. of samples

Page

Work Order

12-SEP-2008

Received Analysed 74 74

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814211 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814211:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

Inorganics

: 5 of 5

Client

: ERM HONG KONG

Work Order HK0814211



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	ratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754098)						
HK0814211-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0
HK0814211-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	29.1
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754099)						
HK0814211-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	5	5	0.0
HK0814211-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	8	8	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754100)						
HK0814211-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	5	5	0.0
HK0814211-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	4	6	20.6
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754101)						
HK0814211-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	4	5	0.0
HK0814211-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	4	5	32.9

## Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	3) Report		Laboratory Control S	pike (LCS) and Laborate	ory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLo	ot: 754098)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	92.0		85	115		
EA/ED: Physical and Aggregate Properties (QCLo	ot: 754099)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	108		85	115		
EA/ED: Physical and Aggregate Properties (QCLo	ot: 754100)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	104		85	115		
EA/ED: Physical and Aggregate Properties (QCLo	ot: 754101)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	110		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Contact

: MS KAREN LUI

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: Karen.Lui@erm.com E-mail

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Proiect : EM&A FOR THE PERMANENT AVIATION FUEL

**FACILITY** 

Order number : ----

C-O-C number : ----

Site

Laboratory : ALS Technichem (HK) Pty Ltd

Contact : Wong Wai Man, Alice

Address

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Quote number

E-mail

· 10-SEP-2008 Date received

Page

Work Order

13-SEP-2008 Date of issue

No. of samples Received 74

: 1 of 5

HK0814206

74 Analysed

Authorised results for:-

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814206 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814206:

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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Signatory Position

: 5 of 5

Client

: ERM HONG KONG

Work Order

HK0814206



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	ratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754942)						
HK0814206-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	20.2
HK0814206-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754943)						
HK0814206-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	8	7	18.9
HK0814206-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	4	5	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754944)						
HK0814206-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	3	4	0.0
HK0814206-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	8	7	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 754945)						
HK0814206-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0
HK0814206-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	6	5	0.0

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	3) Report		Laboratory Control S	pike (LCS) and Laborate	ory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Red	overy (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCL	ot: 754942)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	95.5		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 754943)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	103		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 754944)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	94.0		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 754945)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

Client : ERM HONG KONG

Laboratory

: ALS Technichem (HK) Pty Ltd

: 11/F., Chung Shun Knitting Centre,

: 1 of 5

Contact : MS KAREN LUI Contact

Address

: Wong Wai Man, Alice

Work Order HK0814207

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: EM&A FOR THE PERMANENT AVIATION FUEL

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11-SEP-2008 Date received

**FACILITY** 

Quote number

Date of issue

17-SEP-2008

Order number : ----

Page

Received

C-O-C number : ----Site

No. of samples

74 Analysed

74

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814207 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814207:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 5 of 5

Client

: ERM HONG KONG

Work Order HK0814207



## Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 756413)										
HK0814207-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0				
HK0814207-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 756414)										
HK0814207-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	9	9	0.0				
HK0814207-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	6	7	16.2				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 756415)										
HK0814207-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0				
HK0814207-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	9	8	0.0				
EA/ED: Physical and	Aggregate Properties (QC	C Lot: 756416)										
HK0814207-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0				
HK0814207-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	7	6	0.0				

## Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Red	covery (%)	Recovery	Limits (%)	RPD	s (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC	Lot: 756413)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	110		85	115		
EA/ED: Physical and Aggregate Properties (QC	Lot: 756414)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	110		85	115		
EA/ED: Physical and Aggregate Properties (QC	Lot: 756415)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	89.0		85	115		
EA/ED: Physical and Aggregate Properties (QC	Lot: 756416)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.0		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



74

#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page : 1 of 5

Contact : MS KAREN LUI : Wong Wai Man, Alice Work Order : LIKE

Contact : MS KAREN LUI Contact : Wong Wai Man, Alice Work Order : HK0814208

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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : ---- Date received : 12-SEP-2008

FACILITY

Order number : ---- Date of issue : 18-SEP-2008

C-O-C number : ---- No. of samples - Received :

Site : --- - - Analysed : 74

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814208 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814208 : 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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Electronic signing has been carried out in compliance with procedures specified in the 'Electronic Transactions Ordinance' of Hong Kong. Chapter 553. Section 6.

Signatory Position Authorised results for:-

Fung Lim Chee, Richard General Manager Inorganics

Work Order

: 5 of 5

Client :

: ERM HONG KONG

ALS

## Laboratory Duplicate (DUP) Report

HK0814208

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 758821)										
HK0814208-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	6	5	0.0				
HK0814208-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 758822)										
HK0814208-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	18	18	0.0				
HK0814208-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 758823)										
HK0814208-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	6	5	0.0				
HK0814208-068	IMO1 S DUP MF	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 758824)										
HK0814208-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	11	12	12.8				
HK0814208-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0				

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Red	covery (%)	Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCL	ot: 758821)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	92.5		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 758822)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	91.0		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 758823)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	92.5		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 758824)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	89.0		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

Client : ERM HONG KONG Contact : MS KAREN LUI

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Proiect : EM&A FOR THE PERMANENT AVIATION FUEL

**FACILITY** 

Order number : ----

Address

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C-O-C number

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Quote number

· 16-SEP-2008 Date received

Page

Work Order

19-SEP-2008 Date of issue

No. of samples Received 98

: 1 of 5

HK0814209

Analysed

98

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814209 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814209:

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.

Address

E-mail

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Signatory Position Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 5 of 5

Client : ERM HONG KONG

Work Order HK0814209



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	oratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 760247)						
HK0814209-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	11	10	12.6
HK0814209-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	8	10	20.9
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 760248)						
HK0814209-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	8	8	0.0
HK0814209-033	IMO3 M ME	EA025: Suspended Solids (SS)		1	mg/L	9	10	11.3
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 760249)						
HK0814209-043	C2 (NM5) S ME	EA025: Suspended Solids (SS)		1	mg/L	9	8	15.6
HK0814209-055	MPB1 S MF	EA025: Suspended Solids (SS)		1	mg/L	9	10	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 760250)						
HK0814209-065	MPB2 B MF	EA025: Suspended Solids (SS)		1	mg/L	9	10	14.6
HK0814209-075	IMO2 M MF	EA025: Suspended Solids (SS)		1	mg/L	8	9	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 760251)						
HK0814209-085	IMO4 S MF	EA025: Suspended Solids (SS)		1	mg/L	8	9	14.6
HK0814209-095	C1 (NM3) B MF	EA025: Suspended Solids (SS)		1	mg/L	8	8	0.0

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MI	B) Report		Laboratory Control	Spike (LCS) and Labora	atory Control S	pike Duplicat	e (DCS) Report	
					Spike	Spike R	ecovery (%)	Recovery	Limits (%)	RPL	Os (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QC	CLot: 760247)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	104		85	115		
EA/ED: Physical and Aggregate Properties (QC	CLot: 760248)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	94.5		85	115		
EA/ED: Physical and Aggregate Properties (QC	CLot: 760249)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	107		85	115		
EA/ED: Physical and Aggregate Properties (QC	CLot: 760250)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	106		85	115		
EA/ED: Physical and Aggregate Properties (QC	CLot: 760251)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	90.5		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

Client : ERM HONG KONG Contact

: MS KAREN LUI

: 21/F, LINCOLN HOUSE, 979 KING'S ROAD,

TAIKOO PLACE, ISLAND EAST,

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Proiect : EM&A FOR THE PERMANENT AVIATION FUEL

**FACILITY** 

Order number : ----

Address

C-O-C number : ----Site

Laboratory : ALS Technichem (HK) Pty Ltd

Contact : Wong Wai Man, Alice

Address : 11/F., Chung Shun Knitting Centre,

1 - 3 Wing Yip Street,

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Quote number

E-mail

Date received

Page

Work Order

· 17-SEP-2008

HK0814210

: 1 of 5

Date of issue No. of samples 22-SEP-2008 Received

74 74

Analysed

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814210 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814210:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 5 of 5

Client

: ERM HONG KONG

Work Order



## Laboratory Duplicate (DUP) Report

HK0814210

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 762435)										
HK0814210-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	11	10	15.4				
HK0814210-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	8	9	14.2				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 762436)										
HK0814210-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	10	10	0.0				
HK0814210-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	7	8	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 762437)										
HK0814210-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	20	20	0.0				
HK0814210-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	16	16	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 762438)										
HK0814210-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	12	11	0.0				
HK0814210-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	7	8	16.5				

## Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Red	covery (%)	Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCL	ot: 762435)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.5		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 762436)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	95.5		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 762437)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	95.5		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 762438)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

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: EM&A FOR THE PERMANENT AVIATION FUEL

**FACILITY** 

Order number : ----

C-O-C number : ----

Site

Laboratory

Quote number

E-mail

: ALS Technichem (HK) Pty Ltd

Contact : Wong Wai Man, Alice Address

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Date received

Page

Work Order

· 18-SEP-2008

HK0814213

Date of issue No. of samples 23-SEP-2008

: 1 of 5

Received

74

74 Analysed

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814213 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814213:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 5 of 5

Client : I

: ERM HONG KONG

Work Order HK0814213



## Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report								
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 763696)										
HK0814213-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	17	17	0.0				
HK0814213-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	18	17	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 763697)										
HK0814213-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	10	10	0.0				
HK0814213-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	12	11	0.0				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 763698)										
HK0814213-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	15	14	0.0				
HK0814213-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	12	13	11.2				
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 763699)										
HK0814213-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	11	12	0.0				
HK0814213-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	13	11	16.7				

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Red	covery (%)	Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCL	ot: 763696)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	94.0		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 763697)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	104		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 763698)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	106		85	115		
EA/ED: Physical and Aggregate Properties (QCL	ot: 763699)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115		

## Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

Client : ERM HONG KONG

: MS KAREN LUI

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Proiect : EM&A FOR THE PERMANENT AVIATION FUEL

**FACILITY** 

Order number : ----

C-O-C number : ----Site

Laboratory : ALS Technichem (HK) Pty Ltd

Contact : Wong Wai Man, Alice

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Quote number

E-mail

Date received

Page

Work Order

· 19-SEP-2008

HK0814212

: 1 of 5

Date of issue No. of samples · 24-SEP-2008

Received Analysed

98

98

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0814212 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0814212:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 5 of 5

Client : ERM HONG KONG

Work Order HK0814212



## Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 764915)									
HK0814212-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	3	3	0.0			
HK0814212-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	5	4	23.6			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 764916)									
HK0814212-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0			
HK0814212-033	IMO3 M ME	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 764917)									
HK0814212-043	C2 (NM5) S ME	EA025: Suspended Solids (SS)		1	mg/L	4	5	26.3			
HK0814212-055	MPB1 S MF	EA025: Suspended Solids (SS)		1	mg/L	8	7	0.0			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 764918)									
HK0814212-065	MPB2 B MF	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0			
HK0814212-075	IMO2 M MF	EA025: Suspended Solids (SS)		1	mg/L	7	8	14.9			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 764919)									
HK0814212-085	IMO4 S MF	EA025: Suspended Solids (SS)		1	mg/L	5	4	0.0			
HK0814212-095	C1 (NM3) B MF	EA025: Suspended Solids (SS)		1	mg/L	4	5	22.2			

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MI	3) Report		Laboratory Control	Spike (LCS) and Labor	atory Control S	pike Duplicat	e (DCS) Report	
					Spike	Spike R	ecovery (%)	Recovery	Limits (%)	RPL	Os (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (Q	CLot: 764915)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	98.5		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 764916)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	93.0		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 764917)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	106		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 764918)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	106		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 764919)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	112		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



: 1 of 5

#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page
Contact : MS KAREN LUI Contact : Wong Wai Man, Alice Work Order

: MS KAREN LUI Contact : Wong Wai Man, Alice Work Order : HK0815350 : 21/F, LINCOLN HOUSE, 979 KING'S ROAD, Address : 11/F., Chung Shun Knitting Centre,

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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : --- Date received : 22-SEP-2008

FACILITY

Order number : ---- Date of issue : 25-SEP-2008

C-O-C number : ---- No. of samples - Received : 94

Site : --- - Analysed : 94

#### **Report Comments**

Address

This report for ALS Technichem (HK) Pty Ltd work order reference HK0815350 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0815350: 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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Signatory Position Authorised results for:-

Fung Lim Chee, Richard General Manager Inorganics

Page Number : 5 of 5

Client : ERM HONG KONG

Work Order HK0815350



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	ratory Duplicate (DUP) I	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 766404)						
HK0815350-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	21.9
HK0815350-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 766405)						
HK0815350-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0
HK0815350-035	IMO3 B ME	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 766406)						
HK0815350-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0
HK0815350-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 766407)						
HK0815350-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	3	4	0.0
HK0815350-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	11	11	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 766408)						
HK0815350-089	IMO4 B MF	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0
HK0815350-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	7	7	0.0

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MI	3) Report		Laboratory Control S	Spike (LCS) and Labora	tory Control S	pike Duplica	te (DCS) Report	(DCS) Report	
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)		
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (Q	CLot: 766404)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	88.5		85	115			
EA/ED: Physical and Aggregate Properties (Q	CLot: 766405)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	93.0		85	115			
EA/ED: Physical and Aggregate Properties (Q	CLot: 766406)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	94.0		85	115			
EA/ED: Physical and Aggregate Properties (Q	CLot: 766407)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.5		85	115			
EA/ED: Physical and Aggregate Properties (Q	CLot: 766408)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115			

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

: Wong Wai Man, Alice

1 - 3 Wing Yip Street,

Client : ERM HONG KONG

: MS KAREN LUI

Laboratory Contact

: ALS Technichem (HK) Pty Ltd

Page

: 1 of 4

Contact Address

: 21/F, LINCOLN HOUSE, 979 KING'S ROAD,

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Work Order

HK0815079

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Date received

· 23-SEP-2008

Proiect : EM&A FOR THE PERMANENT AVIATION FUEL **FACILITY** 

Order number : ----

C-O-C number : ----Site

Date of issue

26-SEP-2008

44

No. of samples

Received Analysed

44

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0815079 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0815079:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

Inorganics

A Campbell Brothers Limited Company

: 4 of 4

Client

: ERM HONG KONG

Work Order

HK0815079

### Laboratory Duplicate (DUP) Report

Matrix: WATER				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 768578)									
HK0815079-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	2	2	0.0			
HK0815079-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	4	3	39.7			
EA/ED: Physical and	d Aggregate Properties	s (QC Lot: 768579)									
HK0815079-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	2	2	0.0			
HK0815079-035	IMO3 B ME	EA025: Suspended Solids (SS)		1	mg/L	5	4	21.8			
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 768580)									
HK0815079-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	2	4	60.5			

## Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike	Spike Spike Recovery (%)		Recovery Limits	(%) F	RPDs (%)		
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low Hig	h Value	Control Limit		
EA/ED: Physical and Aggregate Properties (QC	CLot: 768578)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	92.0		85 11	5			
EA/ED: Physical and Aggregate Properties (QC	CLot: 768579)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	90.5		85 11	5			
EA/ED: Physical and Aggregate Properties (QC	CLot: 768580)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.0		85 11	5			

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page : 1 of 5

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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : --- Date received : 25-SEP-2008

FACILITY

Order number : ---- Date of issue : 30-SEP-2008

C-O-C number : --- No. of samples - Received : 94

Site : --- - - Analysed : 94

#### **Report Comments**

This report for ALS Technichem (HK) Pty Ltd work order reference HK0815201 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0815201 : 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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Signatory Position Authorised results for:-

Fung Lim Chee, Richard General Manager Inorganics

Page Number : 5 of 5

Client : ERM HONG KONG

Work Order HK0815201



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	oratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 770077)						
HK0815201-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	20	21	6.8
HK0815201-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	6	8	25.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 770078)						
HK0815201-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	21	22	0.0
HK0815201-035	IMO3 B ME	EA025: Suspended Solids (SS)		1	mg/L	8	7	18.2
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 770079)						
HK0815201-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	12	11	0.0
HK0815201-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	8	6	26.2
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 770080)						
HK0815201-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	21	22	0.0
HK0815201-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	12	12	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 770081)						
HK0815201-089	IMO4 B MF	EA025: Suspended Solids (SS)		1	mg/L	10	8	17.0
HK0815201-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	11	11	0.0

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report				Laboratory Control S	Spike (LCS) and Labora	tory Control S	pike Duplica	te (DCS) Report	
					Spike	Spike Re	covery (%)	Recovery	Limits (%)	RPL	Os (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (Q	(CLot: 770077)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	89.5		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 770078)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	106		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 770079)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.5		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 770080)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	103		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 770081)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	94.0		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

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**FACILITY** 

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Date received

Page

Work Order

· 26-SEP-2008

HK0815202

: 1 of 5

03-OCT-2008 Date of issue

No. of samples Received

Analysed

94 94

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0815202 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0815202:

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.

E-mail

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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 5 of 5

Client : ERM HONG KONG

Work Order HK0815202



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	ratory Duplicate (DUP) I	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 771047)						
HK0815202-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	4	5	0.0
HK0815202-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 771048)						
HK0815202-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0
HK0815202-035	IMO3 B ME	EA025: Suspended Solids (SS)		1	mg/L	9	9	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 771049)						
HK0815202-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	6	7	0.0
HK0815202-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 771050)						
HK0815202-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	8	7	0.0
HK0815202-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	4	6	22.5
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 771051)						
HK0815202-089	IMO4 B MF	EA025: Suspended Solids (SS)		1	mg/L	4	5	0.0
HK0815202-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	4	4	0.0

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report				Laboratory Control	Spike (LCS) and Labora	atory Control S	pike Duplicat	e (DCS) Report	
					Spike	Spike Spike Recovery (%)		Recovery	Limits (%)	RPL	Os (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (Q	CLot: 771047)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 771048)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 771049)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	107		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 771050)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	106		85	115		
EA/ED: Physical and Aggregate Properties (Q	CLot: 771051)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	108		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

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Date received

Page

Work Order

· 29-SEP-2008

HK0815200

Date of issue No. of samples 06-OCT-2008

Received

: 1 of 5

94 94

Analysed

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0815200 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0815200:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 5 of 5

Client : ERM HONG KONG

Work Order HK0815200



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	ratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773242)						
HK0815200-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	7	6	0.0
HK0815200-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773243)						
HK0815200-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	5	5	0.0
HK0815200-035	IMO3 B ME	EA025: Suspended Solids (SS)		1	mg/L	8	8	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773244)						
HK0815200-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	6	6	0.0
HK0815200-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	5	6	22.7
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773245)						
HK0815200-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	5	6	0.0
HK0815200-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	7	7	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773246)						
HK0815200-089	IMO4 B MF	EA025: Suspended Solids (SS)		1	mg/L	8	7	0.0
HK0815200-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	6	8	18.9

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (MI	B) Report		Laboratory Control S	Spike (LCS) and Labora	tory Control S	pike Duplica	cate (DCS) Report	
					Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (Q	(CLot: 773242)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	96.5		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 773243)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	98.0		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 773244)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	99.5		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 773245)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	93.0		85	115		
EA/ED: Physical and Aggregate Properties (Q	(CLot: 773246)										
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	102		85	115		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

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Quote number

E-mail

· 30-SEP-2008 Date received

Page

Work Order

08-OCT-2008 Date of issue

: 1 of 5

HK0815257

No. of samples

Received Analysed

94

94

#### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0815257 supersedes any previous reports with this reference. The completion date of analysis is . 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 HK0815257:

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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Signatory

Position

Authorised results for:-

Fung Lim Chee, Richard

**General Manager** 

: 4 of 5

Client : ERM HONG KONG

Work Order HK0815257



Sub-Matrix: MARINE WATER		Compound	EA025: Suspended Solids (SS)		
		LOR Unit	1 mg/L		
Client sample ID	Client sampling date /	Laboratory sample	EA/ED: Physical and		
	time	ID	Aggregate Properties		
IMO2 B MF	[30-SEP-2008]	HK0815257-077	12		
IMO2 B DUP MF	[30-SEP-2008]	HK0815257-078	13		
IMO3 S MF	[30-SEP-2008]	HK0815257-079	13		
IMO3 S DUP MF	[30-SEP-2008]	HK0815257-080	13		
IMO3 B MF	[30-SEP-2008]	HK0815257-083	7		
IMO3 B DUP MF	[30-SEP-2008]	HK0815257-084	5		
IMO4 S MF	[30-SEP-2008]	HK0815257-085	13		
IMO4 S DUP MF	[30-SEP-2008]	HK0815257-086	12		
IMO4 M MF	[30-SEP-2008]	HK0815257-087	13		
IMO4 M DUP MF	[30-SEP-2008]	HK0815257-088	13		
IMO4 B MF	[30-SEP-2008]	HK0815257-089	13		
IMO4 B DUP MF	[30-SEP-2008]	HK0815257-090	15		
C1 (NM3) S MF	[30-SEP-2008]	HK0815257-091	15		
C1 (NM3) S DUP MF	[30-SEP-2008]	HK0815257-092	14		
C1 (NM3) M MF	[30-SEP-2008]	HK0815257-093	15		
C1 (NM3) M DUP MF	[30-SEP-2008]	HK0815257-094	13		
C1 (NM3) B MF	[30-SEP-2008]	HK0815257-095	13		
C1 (NM3) B DUP MF	[30-SEP-2008]	HK0815257-096	13		
C3 (NM6) S MF	[30-SEP-2008]	HK0815257-097	10		
C3 (NM6) S DUP MF	[30-SEP-2008]	HK0815257-098	8		
C3 (NM6) M MF	[30-SEP-2008]	HK0815257-099	10		
C3 (NM6) M DUP MF	[30-SEP-2008]	HK0815257-100	8		
C3 (NM6) B MF	[30-SEP-2008]	HK0815257-101	11		
C3 (NM6) B DUP MF	[30-SEP-2008]	HK0815257-102	8		

Page Number : 5 of 5

Client : ERM HONG KONG

Work Order HK0815257



## Laboratory Duplicate (DUP) Report

Matrix: WATER					Labo	oratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773924)						
HK0815257-001	MP S ME	EA025: Suspended Solids (SS)		1	mg/L	12	12	0.0
HK0815257-013	MPB2 S ME	EA025: Suspended Solids (SS)		1	mg/L	17	19	14.7
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773925)						
HK0815257-023	IMO1 B ME	EA025: Suspended Solids (SS)		1	mg/L	17	19	12.6
HK0815257-035	IMO3 B ME	EA025: Suspended Solids (SS)		1	mg/L	10	9	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773926)						
HK0815257-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)		1	mg/L	12	10	10.0
HK0815257-057	MPB1 M MF	EA025: Suspended Solids (SS)		1	mg/L	14	14	0.0
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773927)						
HK0815257-067	IMO1 S MF	EA025: Suspended Solids (SS)		1	mg/L	14	15	10.0
HK0815257-077	IMO2 B MF	EA025: Suspended Solids (SS)		1	mg/L	12	14	14.7
EA/ED: Physical and	d Aggregate Properties	(QC Lot: 773928)						
HK0815257-089	IMO4 B MF	EA025: Suspended Solids (SS)		1	mg/L	13	14	0.0
HK0815257-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)		1	mg/L	10	11	0.0

### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER			Method Blank (ME	B) Report	t Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report							
					Spike	Spike Re	covery (%)	Recovery	Limits (%)	RPD	RPDs (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	DCS	Low	High	Value	Control Limit	
EA/ED: Physical and Aggregate Properties (QCLot: 773924)												
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	97.0		85	115			
EA/ED: Physical and Aggregate Properties (QCLot: 773925)												
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	108		85	115			
EA/ED: Physical and Aggregate Properties (Q	(CLot: 773926)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	93.5		85	115			
EA/ED: Physical and Aggregate Properties (Q	(CLot: 773927)											
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	110		85	115			
EA/ED: Physical and Aggregate Properties (QCLot: 773928)												
EA025: Suspended Solids (SS)		2	mg/L	<2	20 mg/L	105		85	115			

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

## Annex G

Impact Water Quality Monitoring Results

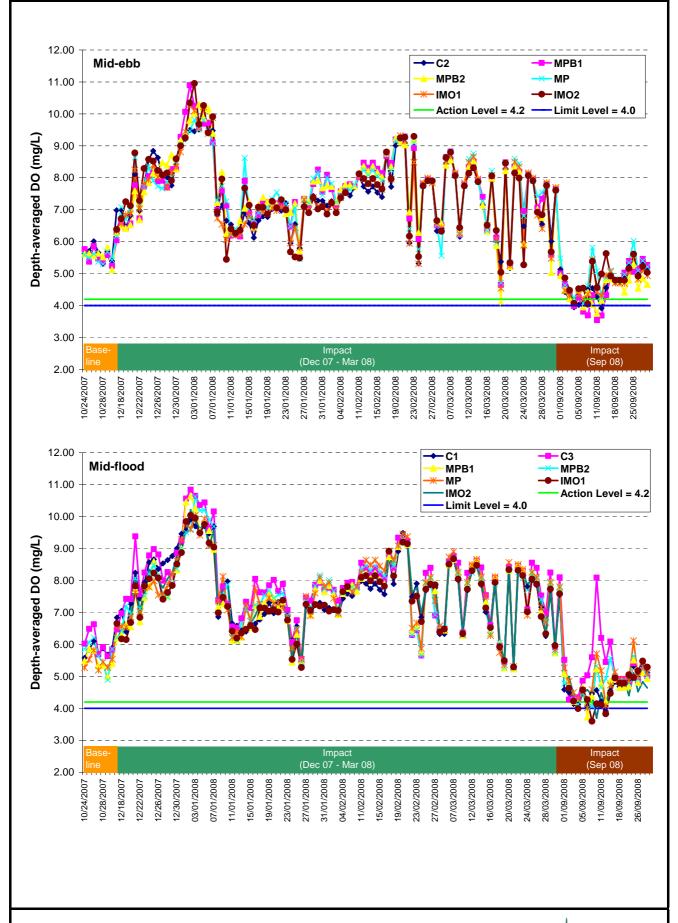


Figure G1 Dissolved oxygen concentration (depth-averaged) (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 Sep to 30 Sep 08, and previous monitoring periods (24 to 30 Oct 07 for baseline monitoring; 17 Dec 07 to 31 Mar 08 for impact monitoring). No monitoring was conducted during public holidays and weekends, and typhoon event on 23 and 24 Sep 08 since no dredging operation was undertaken.



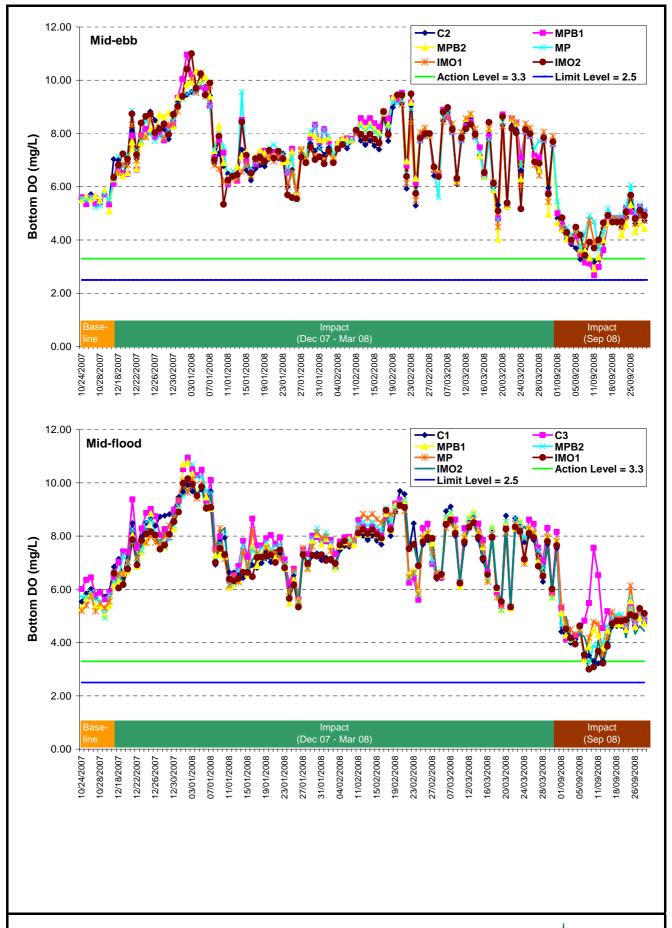


Figure G2 Dissolved oxygen concentration (bottom) (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 Sep to 30 Sep 08, and previous monitoring periods (24 to 30 Oct 07 for baseline monitoring; 17 Dec 07 to 31 Mar 08 for impact monitoring). No monitoring was conducted during public holidays and weekends, and typhoon event on 23 and 24 Sep 08 since no dredging operation was undertaken.



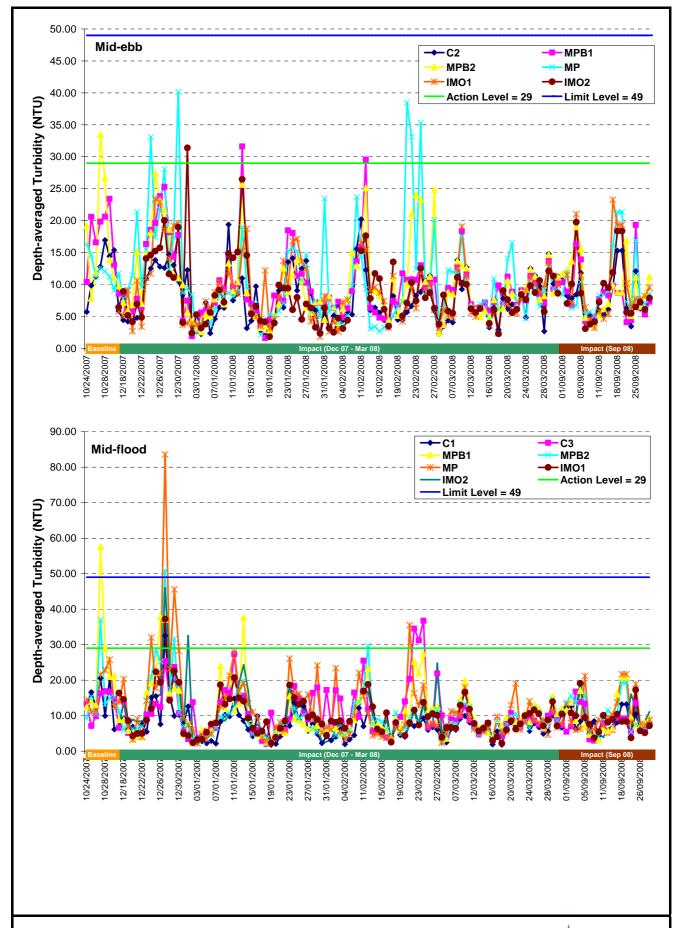


Figure G3 Depth-averaged turbidity (NTU) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 Sep to 30 Sep 08, and previous monitoring periods (24 to 30 Oct 07 for baseline monitoring; 17 Dec 07 to 31 Mar 08 for impact monitoring). No monitoring was conducted during public holidays and weekends, and typhoon event on 23 and 24 Sep 08 since no dredging operation was undertaken.



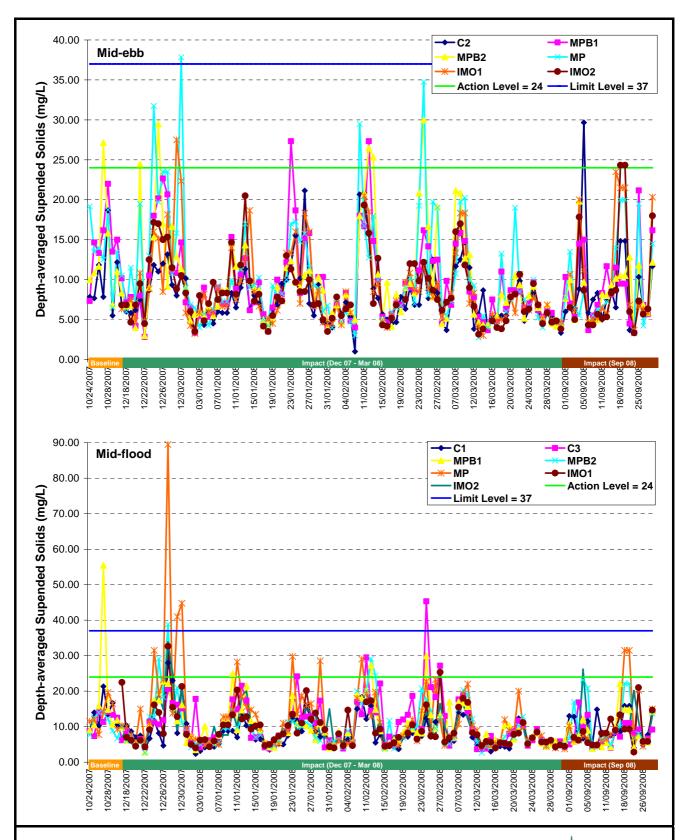


Figure G4 Depth-averaged suspended solids concentration (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 Sep to 30 Sep 08, and previous monitoring periods (24 to 30 Oct 07 for baseline monitoring; 17 Dec 07 to 31 Mar 08 for impact monitoring). No monitoring was conducted during public holidays and weekends, and typhoon event on 23 and 24 Sep 08 since no dredging operation was undertaken.



Sampling Date	01/09/2008
Weather & Ambient Temperature	Fine, 31C

Station			C2 (	NM5)			1	
Time (hh:mm)			14:00	-14:04			1	
Water Depth (m)			20	).2				
Monitoring Depth (m)	1	.0	9.2					
Trial	Trial 1	Trial 1 Trial 2 Trial 1 Trial 2 Trial 1 Trial 2						Bottom
Water Temperature (°C)	29.3	29.5	27.8	27.8	27.0	27.0	28.04	-
Salinity (ppt)	16.9	16.4	23.0	22.8	26.1	26.0	21.83	-
pH	7.2	7.4	7.2	7.4	7.1	7.3	7.26	
D.O. Saturation (%)	80.4	79.1	74.2	70.9	73.6	66.2	74.07	-
D.O. (mg/L)	5.6	5.5	5.1	4.9	5.1	4.6	5.13	4.82
Turbidity (NTU)	4.9	5.3	6.6	6.4	20.3	20.4	10.65	-
SS (mg/L)	6.0	5.0	6.00	-				
Remarks			No	dredging wo	orks was obs	erved.		

<sup>\*</sup>At the time of monitoring, dredger had not been mobilized yet and hence no monitoring was conducted at Stations IMO1 and IMO2.

#### Compliance with Action and Limit Level

Parameter	As in	EM&A	C2*130%		
	Action Level	Limit Level	Action Level	Limit Level	
DO (Bottom)	3.3	2.5	4.8	4.8	
DO (Depth-averaged)	4.2	4.0	5.1	5.1	
Turbidity (Depth-averaged)	29.0	49.0	13.8	13.8	
SS (Depth-averaged)	24.0	37.0	7.8	7.8	

#### Mid-Ebb

Station			M	PB1				
Time (hh:mm)			14:27	-14:29				
Water Depth (m)			8	.0				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.9	28.8	28.2	28.2	28.1	28.2	28.39	-
Salinity (ppt)	17.8	17.7	20.5	20.5	20.8	20.7	19.66	-
pH	7.4	7.4	7.4	7.4	7.4	7.4	7.41	
D.O. Saturation (%)	72.4	72.5	70.9	71.5	70.9	72.8	71.83	-
D.O. (mg/L)	5.1	5.1	4.9	5.0	4.9	5.1	5.01	5.00
Turbidity (NTU)	9.2	8.8	11.5	10.6	11.5	10.9	10.42	-
SS (mg/L)	7.0	6.0	10.33	-				
Remarks		•	No	dredging wo	orks was obs	served.		

Station			MF	B2			1	
Time (hh:mm)			14:36	-14:39				
Water Depth (m)			8	.6				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 1 Trial 2 Trial 1 Trial 2 Trial 1 Trial 2						Bottom
							averaged	
Water Temperature (°C)	28.9	29.1	28.5	28.5	26.8	27.5	28.22	-
Salinity (ppt)	18.0	17.2	19.4	19.5	26.8	24.8	20.95	-
pH	7.4	7.4	7.4	7.5	7.5	7.4	7.41	
D.O. Saturation (%)	75.0	73.3	73.7	69.6	67.2	68.2	71.17	-
D.O. (mg/L)	5.2	5.1	5.1	4.9	4.6	4.7	4.94	4.66
Turbidity (NTU)	6.7	6.5	7.9	7.8	20.6	20.8	11.72	-
SS (mg/L)	6.0	6.0	7.67	-				
Remarks			No	dredging wo	orks was obs	erved.		

Station			N	IP.			1	
Time (hh:mm)			14:20	-14:21				
Water Depth (m)			4	.4				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 1 Trial 2 Trial 1 Trial 2 Trial 1 Trial 2					Depth-	Bottom
							averaged	
Water Temperature (°C)	29.5	29.5	-	-	28.2	28.1	28.81	-
Salinity (ppt)	17.3	17.3	-	-	20.1	21.8	19.14	-
pH	7.3	7.3	-	-	7.3	7.3	7.31	
D.O. Saturation (%)	81.6	77.5	-	-	77.0	79.4	78.88	-
D.O. (mg/L)	5.7	5.4	-	-	5.4	5.5	5.48	#DIV/0!
Turbidity (NTU)	8.3	8.2	8.38	-				
SS (mg/L)	7.0	7.0	7.75	-				
Remarks		•	No	dredging wo	orks was obs	served.		

	MPB1	MF	B2	MP		
Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan Exceeda		
e of Action		ce of	ce of Limit	ce of	ce of Limit	
Level		Action	Level	Action	Level	
N	N	N	N	N	N	
N	N	N	N	N	N	
N	N	N	N	N	N	
N	N	N	N	N	N	

Sampling Date	01/09/2008
Weather & Ambient Temperature	Sunny, 30C

Station			C1 (	NM3)							
Time (hh:mm)			20:41	-20:44							
Water Depth (m)			1:	5.4							
Monitoring Depth (m)	1	.0	7	1.4							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.5	28.6	26.8	26.8	26.5	26.2	27.22	-			
Salinity (ppt)	21.4	21.0	26.8	26.5	27.7	28.6	25.35	-			
pH	7.2	7.2	7.3	7.3	7.3	7.3	7.24				
D.O. Saturation (%)	70.8	71.9	64.9	63.9	63.8	64.3	66.60	-			
D.O. (mg/L)	4.9	5.0	4.5	4.4	4.4	4.4	4.59	4.41			
Turbidity (NTU)	10.8	10.9	12.3	11.9	13.9	14.2	12.33	-			
SS (mg/L)	12.0	11.0	14.0	13.00	-						
Remarks		No dredging works was observed.									

Station			C3 (	NM6)				
Time (hh:mm)			20:02	:-20:07				
Water Depth (m)			6	6.4				
Monitoring Depth (m)	1	.0	3					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	29.9	29.9	29.6	29.1	28.7	28.7	29.33	-
Salinity (ppt)	15.6	15.5	16.5	17.8	19.4	19.9	17.44	-
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.31	
D.O. Saturation (%)	82.7	82.0	78.8	79.8	78.3	74.9	79.42	-
D.O. (mg/L)	5.8	5.7	5.5	5.6	5.4	5.2	5.52	5.32
Turbidity (NTU)	4.7	4.6	5.1	4.9	6.9	6.7	5.48	-
SS (mg/L)	4.0 5.0 5.0 6.0 5.0 5.0						5.00	-
Remarks			•	No dre	dging works	was observed	I.	

<sup>\*</sup>At the time of monitoring, dredger had not been mobilized yet and hence no monitoring was conducted at Stations IMO1 and IMO2.

Compliance with Action and Limit Level										
Parameter	As in	EM&A	Mean(C1+C3)*130%							
	Action Level	Limit Level	Action Level	Limit Level						
DO (Bottom)	3.3	2.5	4.9	4.9						
DO (Depth-averaged)	4.2	4.0	5.1	5.1						
Turbidity (Depth-averaged)	29.0	49.0	11.6	11.6						
SS (Depth-averaged)	24.0	37.0	11.7	11.7						

#### Mid-Flood

Station			MF	PB1								
Time (hh:mm)			19:40	-19:42								
Water Depth (m)			8									
Monitoring Depth (m)	1	.0	4	.4								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.6	29.0	28.1	28.1	28.1	28.0	28.31	-				
Salinity (ppt)	19.1	18.6	20.8	20.8	21.2	21.2	20.28	-				
pH	7.4	7.3	7.3	7.4	7.3	7.3	7.33					
D.O. Saturation (%)	72.1	75.8	73.1	71.1	75.7	71.7	73.25	-				
D.O. (mg/L)	5.0	5.3	5.1	5.0	5.3	5.0	5.09	5.12				
Turbidity (NTU)	8.6	8.4	12.6	12.8	13.5	14.2	11.68	-				
SS (mg/L)	9.0	9.0	9.0	14.0	10.83	-						
Remarks		No dredging works was observed.										

Station			ME	PB2				
Time (hh:mm)			19:49	-19:51				
Water Depth (m)			8	1.8				
Monitoring Depth (m)	1	.0	4	7.8				
Trial	Trial 1	Trial 2	Trial 1	Depth-averaged	Bottom			
Water Temperature (°C)	28.9	28.9	27.9	28.0	27.0	27.3	27.98	-
Salinity (ppt)	18.1	18.1	22.3	21.4	25.1	25.0	21.67	-
pH	7.5	7.5	7.5	7.5	7.6	7.5	7.51	
D.O. Saturation (%)	71.3	72.5	67.4	67.4	69.4	64.8	68.80	-
D.O. (mg/L)	5.0	5.1	4.7	4.7	4.8	4.5	4.78	4.64
Turbidity (NTU)	7.9	7.7	14.7	14.7	18.9	18.4	13.72	-
SS (mg/L)	6.0	6.0	6.0	6.67	-			
Remarks		•						

Station			N	IP.				
Time (hh:mm)			19:31	-19:32				
Water Depth (m)			6					
Monitoring Depth (m)	1	.0	3					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	29.5	29.7	28.4	28.5	27.5	27.8	28.56	-
Salinity (ppt)	17.1	16.8	19.7	19.7	24.0	22.8	20.00	-
pH	7.4	7.4	7.4	7.4	7.3	7.4	7.36	
D.O. Saturation (%)	77.2	78.2	73.6	72.2	77.5	76.8	75.92	-
D.O. (mg/L)	5.4	5.4	5.1	5.0	5.4	5.3	5.27	5.34
Turbidity (NTU)	9.5	9.1	14.3	14.8	16.0	15.7	14.90	-
SS (mg/L)	7.0	7.0	12.0	12.0	10.17	-		
Remarks			•	No dredgi	ng works wa	s observed.		

	MPB1	MF	PB2	M	IP
Exceedanc e of Action Level	Exceedance of Limit Level	ce of Action	Exceedan ce of Limit Level	ce of Action	Exceedan ce of Limit Level
		Level		Level	
N	N	Ν	N	Ν	N
N	N	N	N	N	N
N	N	N	N	N	N
N	N	N	N	N	N

Sampling Date	02/09/2008
Weather & Ambient Temperature	Fine, 31C

Station			C2 (	NM5)			1	
Time (hh:mm)			14:41	-14:43				
Water Depth (m)			19	9.0				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Depth- averaged	Bottom				
Water Temperature (°C)	27.8	27.8	26.7	26.7	26.2	26.4	26.93	-
Salinity (ppt)	22.2	22.7	27.0	27.3	29.1	28.2	26.08	-
pH	7.2	7.3	7.2	7.3	7.2	7.2	7.23	
D.O. Saturation (%)	69.3	66.5	62.1	59.7	62.7	64.4	64.12	-
D.O. (mg/L)	4.8	4.6	4.3	4.1	4.3	4.4	4.42	4.37
Turbidity (NTU)	5.8	6.3	8.0	8.5	10.1	10.9	8.27	-
SS (mg/L)	4.0	4.0	9.0	9.0	7.0	7.0	6.67	-
Remarks			D	redging wor	ks was obse	rved.		

Station			IM	01			Co-ord	dinates
Time (hh:mm)			13:50	-13:53			Northing	Easting
Water Depth (m)				22.20.957	113.53.241			
Monitoring Depth (m)	1	.0		•				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.1	28.4	27.7	27.8	27.2	26.8	27.67	-
Salinity (ppt)	21.4	20.4	22.6	21.8	25.0 7.1	26.7 7.0	22.99 7.07	-
pH	7.1	7.1	7.1	7.1				
D.O. Saturation (%)	65.8	65.9	62.6	63.3	64.8	64.8	64.53	-
D.O. (mg/L)	4.6	4.6	4.3	4.4	4.5	4.46	4.47	4.47
Turbidity (NTU)	7.7	7.8	15.6	11.55	-			
SS (mg/L)	6.0	6.0	10.67	-				
Remarks			D	redging wor	ks was obse	rved.		

Station			IM	O2			Co-ord	dinates				
Time (hh:mm)			14:18	-14:20			Northing	Easting				
Water Depth (m)				22.20.957	113.53.423							
Monitoring Depth (m)	1	.0	3	.0	5	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom				
							averaged					
Water Temperature (°C)	28.8	28.8	28.3	28.2	28.0	27.7	28.31	-				
Salinity (ppt)	19.1	19.2	21.1	21.5	22.1	22.9	20.99	-				
pH	7.0	7.0	7.0	7.0	7.0	7.0	7.01					
D.O. Saturation (%)	72.1	72.4	69.0	68.0	68.6	71.0	70.18	-				
D.O. (mg/L)	5.0	5.0	4.8	4.7	4.8	4.92	4.87	4.84				
Turbidity (NTU)	5.9	5.9	7.3	7.4	7.5	8.3	7.05	-				
SS (mg/L)	5.0	6.0	6.50	-								
Remarks		Dredging works was observed.										

#### Mid-Ebb

Station			MF	PB1			1	
Time (hh:mm)			13:59	-14:01				
Water Depth (m)								
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.9	28.9	28.2	28.1	27.6	27.6	28.20	-
Salinity (ppt)	19.0	18.9	20.5	20.6	23.2	23.4	20.95	-
pH	7.1	7.1	7.1	7.1	7.1	7.1	7.08	
D.O. Saturation (%)	71.1	71.6	64.0	64.8	65.9	66.4	67.30	-
D.O. (mg/L)	4.9	5.0	4.5	4.5	4.6	4.6	4.67	4.58
Turbidity (NTU)	5.5	5.5	9.4	11.4	11.6	8.88	-	
SS (mg/L)	4.0	6.0	7.00	-				
Remarks			D	redging worl	ks was obse	rved.		·

Station			MI	PB2						
Time (hh:mm)			14:08	-14:10						
Water Depth (m)			8	3.8						
Monitoring Depth (m)	1	.0								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	28.4	28.2	27.7	27.8	27.3	27.1	27.73	-		
Salinity (ppt)	20.9	21.3	23.0	22.5	24.7	25.6	23.00	-		
pH	7.2	7.2	7.1	7.2	7.1	7.2	7.16			
D.O. Saturation (%)	67.6	68.0	64.0	62.2	66.6	61.0	64.90	-		
D.O. (mg/L)	4.7	4.7	4.4	4.3	4.6	4.2	4.49	4.41		
Turbidity (NTU)	7.2	7.8	9.3	9.7	19.4	19.8	12.20	-		
SS (mg/L)	8.0	7.0	12.0	10.00	-					
Remarks	Dredging works was observed.									

Station			N	IP			1					
Time (hh:mm)			13:42	-13:44								
Water Depth (m)												
Monitoring Depth (m)	1	.0										
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom				
Water Temperature (°C)	28.9	28.8	-	-	27.2	27.2	28.04	-				
Salinity (ppt)	19.5	19.9			25.1	24.8	22.30	-				
pH	7.1	7.1			7.0	7.1	7.06					
D.O. Saturation (%)	70.2	68.7	-	-	67.4	62.5	67.20	-				
D.O. (mg/L)	4.9	4.8	-	-	4.7	4.3	4.65	4.49				
Turbidity (NTU)	7.1	11.95	-									
SS (mg/L)	8.0	8.0	18.0	13.50	-							
Remarks		Dredging works was observed.										

#### Compliance with Action and Limit Level

Compliance with Action at	ia Limit Lev	<u>'eı</u>												
Parameter	As in	EM&A	C2*1	30%	% IMO1		IM	IMO2		MPB1	MF	PB2	MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.4	4.4	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.4	4.4	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	10.7	10.7	N	N	N	N	N	N	Ν	N	N	N
SS (Depth-averaged)	24.0	37.0	8.7	8.7	N	N	N	N	N	N	N	N	N	N

Sampling Date	02/09/2008
Weather & Ambient Temperature	Fine, 31C

Station			C1 (									
Time (hh:mm)			8:02									
Water Depth (m)			10	6.4								
Monitoring Depth (m)	1	.0	8	3.2	15	5.4						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.4	28.2	26.8	26.3	26.2	26.2	27.01	-				
Salinity (ppt)	21.2	21.6	26.3	28.4	28.6	28.6	25.79	-				
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.30					
D.O. Saturation (%)	71.1	71.6	62.0	61.4	62.5	63.0	65.27	-				
D.O. (mg/L)	4.9	5.0	4.3	4.2	4.3	4.3	4.50	4.32				
Turbidity (NTU)	6.0	6.3	10.8	11.1	21.0	21.2	12.73	-				
SS (mg/L)	7.0	6.0	10.0	10.0	22.0	22.0	12.83	-				
Remarks		No dredging works was observed.										

Station			C3 (	NM6)								
Time (hh:mm)			9:28									
Water Depth (m)			7									
Monitoring Depth (m)	1	.0	3	.5	6	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.2	28.2	26.6	26.7	26.4	26.4	27.08	-				
Salinity (ppt)	21.1	21.2	27.6	27.3	28.1	28.2	25.59	-				
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.31					
D.O. Saturation (%)	67.1	66.4	58.6	59.4	59.6	60.6	61.95	-				
D.O. (mg/L)	4.7	4.6	4.0	4.1	4.1	4.2	4.27	4.14				
Turbidity (NTU)	5.4	5.6	7.4	7.7	7.8	7.9	6.97	-				
SS (mg/L)	4.0	5.0	6.0	6.0	6.0	7.0	5.67	-				
Remarks		No dredging works was observed.										

Station			IM	01			Co-ordinate	s			
Time (hh:mm)			8:46		Northing	Easting					
Water Depth (m)			7		22.21.600	113.53.238					
Monitoring Depth (m)	1	.0	3	.7	6	5.4					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.4	28.4	27.7	27.8	27.3	27.3	27.82	-			
Salinity (ppt)	19.8	19.8	22.5	22.6	24.5 24.4		22.25	-			
pH	7.1	7.2	7.1	7.2	7.1	7.2	7.15				
D.O. Saturation (%)	70.2	70.1	64.7	64.6	66.6	63.9	66.68	-			
D.O. (mg/L)	4.9	4.9	4.5	4.5	4.6	4.4	4.63	4.52			
Turbidity (NTU)	5.1	5.2	9.3	9.7	17.7	17.9	10.82	-			
SS (mg/L)	6.0	6.0	8.0	6.0	8.0	7.00	-				
Remarks		No dredging works was observed.									

Station			IM	02			Co-ordinate	es				
Time (hh:mm)			9:14		Northing	Easting						
Water Depth (m)			5		22.20.944	113.53.432						
Monitoring Depth (m)	1	.0	2									
Trial	29.1	29.1	Trial 1	Depth-averaged	Bottom							
Water Temperature (°C)	4.2	4.0	-	- 28.2 28.0		28.0	28.62	-				
Salinity (ppt)	18.4	8.4 18.4 21.1 21.6		19.88	-							
pH	7.1	7.1	-	-	7.1	7.1	7.13					
D.O. Saturation (%)	71.3	73.5	-	-	72.1	71.5	72.10	-				
D.O. (mg/L)	5.0	5.1	-	-	5.0	5.0	5.00	4.98				
Turbidity (NTU)	6.4	6.4	-	-	8.9	9.1	7.70	-				
SS (mg/L)	4.0	6.0	-	10.0	7.25	-						
Remarks		No dredging works was observed.										

Station										
Time (hh:mm)			8:57							
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)	29.1	29.0	28.6	28.4	27.1	27.1	28.19	-		
Salinity (ppt)	18.1	18.3	19.4	19.8	25.5	25.6	21.12	-		
pH	7.2	7.2	7.2	7.2	7.3	7.3	7.24			
D.O. Saturation (%)	73.1	72.0	67.8	68.9	62.3	61.8	67.65	-		
D.O. (mg/L)	5.1	5.0	4.7	4.8	4.3	4.3	4.69	4.28		
Turbidity (NTU)	5.5	5.7	9.3	9.4	26.1	26.7	13.78	-		
SS (mg/L)	4.0	5.0	5.0	6.0	7.0	8.0	5.83	-		
Remarks		No dredging works was observed.								

Station			MF	PB2								
Time (hh:mm)			9:06									
Water Depth (m)			9	.8								
Monitoring Depth (m)	1	.0	4	.9	8	.8						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	29.2	29.0	28.0	28.0	27.2	27.3	28.11	-				
Salinity (ppt)	18.8	19.2	21.3	21.1	24.7	24.6	21.61	-				
pH	7.2	7.2	7.2	7.2	7.2	7.2	7.21					
D.O. Saturation (%)	72.7	71.0	66.3	65.6	65.9	64.6	67.68	-				
D.O. (mg/L)	5.0	4.9	4.6	4.6	4.6	4.5	4.69	4.51				
Turbidity (NTU)	6.1	6.3	13.7	13.8	27.1	27.3	15.72	-				
SS (mg/L)	4.0	4.0	12.0	14.0	34.0	34.0	17.00	-				
Remarks		No dredging works was observed.										

Station			N									
Time (hh:mm)			8:38									
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)	28.8	28.7	-	-	27.3	27.5	28.08	-				
Salinity (ppt)	18.5	18.8	-	-	24.3	23.4	21.25	-				
pH	7.1	7.0	-	-	7.0	7.0	7.02					
D.O. Saturation (%)	71.0	71.0	-	-	69.1	67.7	69.70	-				
D.O. (mg/L)	5.0	5.0	-	-	4.8	4.7	4.84	4.74				
Turbidity (NTU)	5.6	5.7	-	-	10.2	10.4	7.98	-				
SS (mg/L)	4.0	4.0	-	-	8.0	9.0	6.25	-				
Remarks		No dredging works was observed.										

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	-C3)*130%	IM	101	IMO2			MPB2		MP		
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.2	4.2	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.4	4.4	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	12.8	12.8	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24 0	37.0	12.0	12.0	N	N	N	N	N	N	N	N	N	N

Sampling Date	03/09/2008
Weather & Ambient Temperature	Cloudy, 30C

Station			C2 (	NM5)			1				
Time (hh:mm)			1								
Water Depth (m)			19	9.2			1				
Monitoring Depth (m)	1	.0	9	.6	18	3.2	1				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom			
Water Temperature (°C)	28.7	28.6	27.3	27.4	26.6	26.6	27.52	-			
Salinity (ppt)	20.2	20.1	24.6	24.2	27.1	26.9	23.84	-			
pH	5.6	6.0	5.9	5.6	5.6	5.7	5.74	-			
D.O. Saturation (%)	65.6	64.3	58.4	60.0	60.5	56.9	60.95	-			
D.O. (mg/L)	4.5	4.5	4.0	4.2	4.2	3.9	4.21	4.05			
Turbidity (NTU)	5.1	5.0	7.9	7.4	11.1	10.6	7.85	-			
SS (mg/L)	5.0	5.0 5.0 8.0 6.0 8.0 6.0 6.33									
Remarks			D	redging wor	ks was obse	rved.					

Station			IM	01			Co-ore	dinates
Time (hh:mm)				Northing	Easting			
Water Depth (m)			7	.2			22.21.644	113.53.272
Monitoring Depth (m)	1	.0	3	.6	6	.2		-
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.0	28.0	27.9	27.9	27.4	27.7	27.81	-
Salinity (ppt)	21.1	21.1	21.6	21.5	23.8	22.6	21.93	-
pH	6.0	5.9	6.0	5.9	5.9	5.9	5.93	-
D.O. Saturation (%)	61.9	62.8	61.4	62.5	59.8	63.0	61.90	-
D.O. (mg/L)	4.3	4.4	4.3	4.4	4.1	4.37	4.30	4.26
Turbidity (NTU)	6.6	6.6	7.2	6.8	7.9	7.5	7.10	-
SS (mg/L)	7.0	6.0	6.17	-				
Remarks			D	redging wor	ks was obse	rved.		

Station			IM	02			Co-ord	dinates
Time (hh:mm)				Northing	Easting			
Water Depth (m)			5	.6			22.20.846	113.53.611
Monitoring Depth (m)	1	.0	2	.8	4	.6		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.7	28.8	-	-	27.9	27.9	28.31	-
Salinity (ppt)	17.7	17.4	-	-	21.7	21.8	19.64	-
pH	5.8	5.8	-	-	5.8	5.8	5.82	-
D.O. Saturation (%)	66.3	67.0	-	-	61.8	61.4	64.13	-
D.O. (mg/L)	4.6	4.7	-	-	4.3	4.27	4.48	4.29
Turbidity (NTU)	5.9	5.9	-	-	14.6	14.0	10.10	-
SS (mg/L)	5.0	4.0	5.00	-				
Remarks			D	redging wor	ks was obse	rved.	•	

#### Mid-Ebb

Station			MF	PB1				
Time (hh:mm)			14:42	-14:45				
Water Depth (m)								
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)	28.6	28.2	27.8	27.8	27.8	27.8	27.97	-
Salinity (ppt)	19.7	21.3	22.1	21.9	22.0	22.1	21.50	-
pH	6.1	6.1	6.1	6.0	6.0	6.1	6.07	-
D.O. Saturation (%)	70.0	68.5	61.0	60.7	61.6	62.4	64.03	-
D.O. (mg/L)	4.9	4.8	4.2	4.2	4.3	4.3	4.45	4.31
Turbidity (NTU)	4.6	4.4	7.9	7.5	7.9	8.2	6.75	-
SS (mg/L)	4.0	5.0	6.0	5.33	-			
Remarks			D	redging worl	ks was obse	rved.		·

Station			MI	PB2					
Time (hh:mm)									
Water Depth (m)			8	3.6					
Monitoring Depth (m)	1	.0	4	.3	7	.6			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom	
							averaged		
Water Temperature (°C)	28.5	28.5	27.7	27.7	27.2	27.2	27.81	-	
Salinity (ppt)	18.3	18.3	22.5	22.3	24.5	24.7	21.76	-	
pH	5.8	5.7	5.8	5.7	5.7	5.7	5.74	-	
D.O. Saturation (%)	63.9	64.5	58.4	60.3	58.9	58.0	60.67	-	
D.O. (mg/L)	4.5	4.5	4.1	4.2	4.1	4.0	4.22	4.05	
Turbidity (NTU)	6.4	5.9	11.4	11.7	23.6	23.2	13.70	-	
SS (mg/L)	4.0	4.0	5.0	5.0	6.0	6.0	5.00	-	
Remarks	Dredging works was observed.								

Station			N	IP			1			
Time (hh:mm)			14:33	-14:35						
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)	28.2	28.2	-	-	27.8	27.9	28.04	-		
Salinity (ppt)	20.5	20.5	-	-	22.0	21.9	21.23	-		
pH	6.2	6.2	-	-	6.2	6.2	6.19	-		
D.O. Saturation (%)	63.5	64.6	-	-	62.6	66.4	64.28	-		
D.O. (mg/L)	4.4	4.5	-	-	4.4	4.6	4.47	4.48		
Turbidity (NTU)	5.8	6.1	-	-	6.9	6.6	6.35	-		
SS (mg/L)	8.0	7.0	6.0	6.50	-					
Remarks		Dredging works was observed.								

#### Compliance with Action and Limit Level

Compliance with Action an	ia Limit Lev	<u>/ei</u>												
Parameter	As in	EM&A	C2*1	30%	IMO1		IMO2		MPB1	MF	PB2	IV	MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.0	4.0	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.2	4.2	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	10.2	10.2	N	N	N	N	N	N	Ν	N	N	N
SS (Depth-averaged)	24.0	37.0	8.2	8.2	N	N	N	N	N	N	N	N	N	N

Sampling Date	03/09/2008
Weather & Ambient Temperature	Cloudy, 30C

Station			C1 (	NM3)				
Time (hh:mm)			8:38					
Water Depth (m)			16					
Monitoring Depth (m)	1	.0	8	.0	15	5.0		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.0	28.0	26.3	26.4	25.8	25.9	26.76	-
Salinity (ppt)	22.4	22.5	27.5	27.4	29.3	29.1	26.36	-
pH	5.8	5.8	5.7	5.7	5.7	5.7	5.73	-
D.O. Saturation (%)	65.2	65.9	55.3	57.5	57.5	58.2	59.93	-
D.O. (mg/L)	4.5	4.6	3.8	4.0	4.0	4.0	4.14	3.99
Turbidity (NTU)	5.0	5.1	6.2	6.1	7.5	7.8	6.28	-
SS (mg/L)	6.0	5.0	7.0	6.0	6.33	-		
Remarks				Dredo	jing works w	as observed.		

Station			C3 (	NM6)							
Time (hh:mm)			9:03								
Water Depth (m)			6								
Monitoring Depth (m)	1	.0	3	.4	5	5.8					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.1	28.0	27.1	27.1	26.9	26.9	27.35	-			
Salinity (ppt)	20.7	20.9	24.6	24.6	25.8	25.9	23.74	-			
pH	5.7	5.7	5.6	5.7	5.6	5.5	5.63	-			
D.O. Saturation (%)	64.7	67.3	59.8	59.2	60.2	59.6	61.80	-			
D.O. (mg/L)	4.5	4.7	4.2	4.1	4.2	4.1	4.29	4.14			
Turbidity (NTU)	5.7	5.6	15.2	15.5	29.5	29.1	16.77	-			
SS (mg/L)	7.0	7.0	7.0	37.0	16.83	-					
Remarks		Dredging works was observed.									

Station			IM	01			Co-ordinate	es
Time (hh:mm)			9:45	-9:47			Northing	Easting
Water Depth (m)			7		22.21.666	13.53.277		
Monitoring Depth (m)	1	.0	3					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.0	28.0	27.9	27.9	27.6	27.4	27.81	-
Salinity (ppt)	21.1	21.1	21.6	21.5	23.2	23.7	22.01	-
pH	6.0	6.1	6.1	6.1	6.0	6.1	6.07	-
D.O. Saturation (%)	61.9	61.6	60.0	61.1	60.9	59.5	60.83	-
D.O. (mg/L)	4.3	4.3	4.2	4.3	4.2	4.1	4.23	4.17
Turbidity (NTU)	7.1	6.6	8.8	14.7	9.98	-		
SS (mg/L)	6.0	6.0	6.0	6.0	6.0	6.17	-	
Remarks				Dredo	ging works w	as observed.		

Station			IM	02			Co-ordinat	es		
Time (hh:mm)			9:27	-9:29			Northing	Easting		
Water Depth (m)			5		22.21.324	13.56.782				
Monitoring Depth (m)	1	.0	2							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.6	28.7	-	-	27.8	27.8	28.24	-		
Salinity (ppt)	18.0	17.6	-	-	22.1	22.1	19.93	-		
pH	5.9	6.0	-	-	5.9	6.0	5.93	-		
D.O. Saturation (%)	66.1	64.0	-	-	61.7	61.6	63.35	-		
D.O. (mg/L)	4.6	4.5	-	-	4.3	4.3	4.42	4.28		
Turbidity (NTU)	5.8	5.9	-	-	11.5	11.6	8.70	-		
SS (mg/L)	4.0	4.0	-	8.0	6.00	-				
Remarks		Dredging works was observed.								

Station			MF	PB1						
Time (hh:mm)			9:37							
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)	28.2	28.1	27.8	27.8	27.5	27.3	27.78	-		
Salinity (ppt)	20.8	21.2	21.8	21.9	22.8	23.0	21.92	-		
pH	5.9	6.0	5.9	6.0	5.9	5.9	5.94	-		
D.O. Saturation (%)	62.6	62.0	60.5	59.9	58.6	59.8	60.57	-		
D.O. (mg/L)	4.4	4.3	4.2	4.2	4.1	4.2	4.21	4.12		
Turbidity (NTU)	5.3	5.5	9.2	9.4	11.1	11.6	8.68	-		
SS (mg/L)	4.0	6.0	9.0	8.0	9.0	9.0	7.50	-		
Remarks		Dredging works was observed.								

Station			MF	PB2						
Time (hh:mm)			9:18							
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)	28.6	28.7	27.9	27.8	27.2	27.2	27.89	-		
Salinity (ppt)	17.6	17.4	21.31	-						
pH	5.7	5.7	5.6	5.7	5.5	5.6	5.63	-		
D.O. Saturation (%)	64.1	66.4	60.6	58.8	58.5	59.6	61.33	-		
D.O. (mg/L)	4.5	4.7	4.2	4.1	4.1	4.1	4.27	4.09		
Turbidity (NTU)	6.0	5.9	12.2	11.9	22.5	22.9	13.57	-		
SS (mg/L)	5.0	5.0	7.0	14.0	8.67	-				
Remarks		Dredging works was observed.								

Station										
Time (hh:mm)										
Water Depth (m)										
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)	28.2	28.2	-	-	27.9	27.9	28.05	-		
Salinity (ppt)	20.4	20.4	-	-	21.9	21.9	21.18	-		
pH	6.1	6.1	-	-	6.1	6.1	6.12	-		
D.O. Saturation (%)	64.0	65.3	-	-	63.6	66.0	64.73	-		
D.O. (mg/L)	4.5	4.5	-	-	4.4	4.6	4.50	4.50		
Turbidity (NTU)	5.7	5.9	-	-	6.1	6.3	6.00	-		
SS (mg/L)	7.0	6.0	-	-	6.0	6.0	6.25	-		
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	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.1	4.1	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.2	4.2	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	15.0	15.0	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	15.1	15.1	N	Ν	N	N	N	N	N	N	N	N

Sampling Date	04/09/2008
Weather & Ambient Temperature	Fine, 30C

Station			C2 (	NM5)			1					
Time (hh:mm)			14:37	-14:40								
Water Depth (m)												
Monitoring Depth (m)	1	.0	9	.9	18	3.8						
Trial	Trial 1	Trial 2	Depth- averaged	Bottom								
Water Temperature (°C)	28.5	28.3	27.5	27.5	26.7	26.6	27.51	-				
Salinity (ppt)	18.9	19.7	24.4	24.6	27.0	27.1	23.61	-				
pH	7.0	7.0	7.1	7.1	7.1	7.1	7.07					
D.O. Saturation (%)	59.1	59.6	56.1	56.0	55.5	55.8	57.02	-				
D.O. (mg/L)	4.1	4.2	3.9	3.9	3.8	3.8	3.95	3.84				
Turbidity (NTU)	6.2	6.0	8.45	-								
SS (mg/L)	5.0	5.0 6.0 7.0 8.0 14.0 13.0 8.8										
Remarks			D	redging wor	ks was obse	rved.		-				

Station			IM	01			Co-ore	dinates
Time (hh:mm)				Northing	Easting			
Water Depth (m)			6	.6			22.21.610	113.53.236
Monitoring Depth (m)	1	.0	3	.3	5	.6		•
Trial	Trial 1	Trial 2	Depth- averaged	Bottom				
Water Temperature (°C)	28.3	28.4	28.0	28.0	27.5	27.5	27.93	-
Salinity (ppt)	19.6	19.3	20.7	20.6	23.5	23.5	21.19	-
pH	7.0	6.9	7.0	7.0	7.0	7.0	6.97	
D.O. Saturation (%)	58.3	59.7	59.3	56.7	59.0	56.1	58.18	-
D.O. (mg/L)	4.1	4.2	4.1	4.0	4.1	3.89	4.05	3.99
Turbidity (NTU)	7.9	7.5	21.03	-				
SS (mg/L)	6.0	6.0	20.00	-				
Remarks				redging wor	ks was obse	rved.	•	•

Station			IM	02			Co-ord	dinates
Time (hh:mm)			15:33	-15:35			Northing	Easting
Water Depth (m)			22.20.879	113.53.588				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.7	28.7	28.0	28.0	27.2	27.3	27.99	-
Salinity (ppt)	16.2	16.1	21.0	21.0	24.7	24.7	20.61	-
pH	6.9	6.9	6.9	7.0	7.0	7.0	6.95	
D.O. Saturation (%)	60.1	59.4	57.8	57.1	58.0	57.6	58.33	-
D.O. (mg/L)	4.3	4.2	4.0	4.0	4.0	3.98	4.07	4.00
Turbidity (NTU)	7.2	6.6	19.77	-				
SS (mg/L)	6.0	5.0	17.83	-				
Remarks			D	redging wor	ks was obse	rved.		

Station			MF	PB1				
Time (hh:mm)			15:12	-15:15				
Water Depth (m)								
Monitoring Depth (m)	1	.0	4	.1	7	.2		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.5	28.5	27.7	27.7	27.5	27.5	27.90	-
Salinity (ppt)	18.7	19.0	22.7	22.7	23.7	23.8	21.78	-
pH	6.9	6.9	7.0	7.0	7.0	7.0	6.96	
D.O. Saturation (%)	58.9	59.2	55.9	56.0	57.0	57.0	57.33	-
D.O. (mg/L)	4.1	4.1	3.9	3.9	3.9	3.9	3.98	3.94
Turbidity (NTU)	6.1	5.8	16.32	-				
SS (mg/L)	5.0	5.0	14.50	-				
Remarks			D	redging worl	ks was obse	rved.		•

Station			MF	PB2				
Time (hh:mm)			15:21	-15:23				
Water Depth (m)								
Monitoring Depth (m)	1	.0	4	.3	7	.6		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.6	28.5	28.1	28.2	27.4	27.4	28.01	-
Salinity (ppt)	17.1	17.3	20.3	19.6	24.1	24.0	20.40	-
pH	6.9	6.9	6.9	6.9	7.0	7.0	6.92	
D.O. Saturation (%)	60.6	59.9	58.3	58.9	57.9	59.6	59.20	-
D.O. (mg/L)	4.3	4.2	4.1	4.1	4.0	4.1	4.14	4.07
Turbidity (NTU)	8.4	8.7	10.5	10.6	38.3	37.9	19.07	-
SS (mg/L)	4.0	6.0	47.0	19.83	-			
Remarks		•	D	redging wor	ks was obse	rved.		

Station			I	/IP				
Time (hh:mm)			14:54	-14:56			1	
Water Depth (m)			1					
Monitoring Depth (m)	1	.0	2	2.6	4	.3		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.3	28.3 28.3 27.8 27.7						-
Salinity (ppt)	18.3	18.6	-	-	22.4	22.6	20.51	-
pH	7.0	7.0	-	-	7.1	7.1	7.04	
D.O. Saturation (%)	61.3	60.1	-	-	61.9	59.1	60.60	-
D.O. (mg/L)	4.3	4.2	-	-	4.3	4.1	4.23	4.20
Turbidity (NTU)	5.9	6.1	6.70	-				
SS (mg/L)	4.0	4.0	6.0	5.50	-			
Remarks				redging wor	ks was obse	rved.		

Compliance with Action ar	<u>id Limit Lev</u>	<u>'el</u>												
Parameter	As in	EM&A	C2*130%		J% IMO1		IMO2			MPB1	MPB2		MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.8	3.8	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	3.9	3.9	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	11.0	11.0	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	11.5	11.5	N	N	N	N	N	N	N	N	N	N

Sampling Date	04/09/2008
Weather & Ambient Temperature	Fine, 30C

Station			C1 (	NM3)				
Time (hh:mm)			9:31					
Water Depth (m)			16	6.4				
Monitoring Depth (m)	1	.0	8	.2	1:	5.4		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.0	27.8	26.6	26.4	25.9	26.0	26.79	-
Salinity (ppt)	22.3	22.9	26.7	27.2	29.4	29.1	26.25	-
pH	7.0	7.1	7.1	7.2	7.1	7.1	7.10	
D.O. Saturation (%)	65.0	62.3	57.6	53.7	57.3	62.3	59.70	-
D.O. (mg/L)	4.5	4.3	4.0	3.7	4.0	4.3	4.12	4.12
Turbidity (NTU)	5.8	6.2	8.5	8.7	10.5	10.6	8.38	-
SS (mg/L)	5.0	5.0	8.0	6.67	-			
Remarks				Dredg	jing works w	as observed.		

Station			C3 (					
Time (hh:mm)			9:57					
Water Depth (m)			6	5.8				
Monitoring Depth (m)	1	.0	3	3.4	5	5.8		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.4	28.3	28.0	27.9	27.1	27.2	27.80	-
Salinity (ppt)	17.8	18.1	20.7	21.0	25.3	25.3	21.36	-
pH	6.8	6.9	6.9	6.9	6.8	6.9	6.87	
D.O. Saturation (%)	63.9	63.0	63.0	60.1	62.7	60.8	62.25	-
D.O. (mg/L)	4.5	4.4	4.4	4.2	4.3	4.2	4.34	4.27
Turbidity (NTU)	6.3	6.5	10.1	10.3	25.2	25.0	13.90	-
SS (mg/L)	4.0	5.0	6.0	18.0	9.83	-		
Remarks				Dredo	ging works w	as observed.		

Station			IM	01			Co-ordinate	S
Time (hh:mm)			10:38	-10:40			Northing	Easting
Water Depth (m)			7	.0		22.21.608	113.53.239	
Monitoring Depth (m)	1	.0	3	.0				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.3	28.2	27.9	27.8	27.4	27.5	27.85	-
Salinity (ppt)	19.3	19.8	21.3	21.2	23.7	23.7	21.49	-
pH	7.0	7.0	7.0	7.0	7.0	7.0	7.01	
D.O. Saturation (%)	58.3	58.0	57.8	56.1	56.0	57.8	57.33	-
D.O. (mg/L)	4.1	4.1	4.0	3.9	3.9	4.0	4.00	3.95
Turbidity (NTU)	7.1	6.8	8.7	8.7	41.9	41.4	19.10	-
SS (mg/L)	6.0	7.0	9.0	11.0	8.67	-		
Remarks				Dredg	ging works w	as observed.		

Station			IM	02			Co-ordinate:	S			
Time (hh:mm)			10:11	-10:14			Northing	Easting			
Water Depth (m)			8	.7		22.20.878	113.53.587				
Monitoring Depth (m)	1	.0	4								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.5	28.7	27.7	28.0	27.5	27.1	27.93	-			
Salinity (ppt)	15.9	15.9	22.7	21.1	23.7	24.9	20.70	-			
pH	6.9	6.9	7.0	7.0	7.0	7.0	6.96				
D.O. Saturation (%)	58.5	59.3	56.3	56.5	59.3	56.5	57.73	-			
D.O. (mg/L)	4.1	4.2	3.9	3.9	4.1	3.9	4.02	4.01			
Turbidity (NTU)	6.6	6.9	14.9	14.5	34.2	33.8	18.48	-			
SS (mg/L)	6.0	6.0	12.0	60.0	26.17	-					
Remarks		Dredging works was observed.									

Station			MF	PB1						
Time (hh:mm)			10:29	-10:32						
Water Depth (m)										
Monitoring Depth (m)	1	.0	4							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.6	28.7	27.7	27.7	27.5	27.5	27.94	-		
Salinity (ppt)	18.5	17.2	22.8	22.8	23.9	23.9	21.51	-		
pH	6.9	6.9	7.0	7.0	7.0	7.0	6.97			
D.O. Saturation (%)	59.8	60.8	56.0	57.6	59.4	56.4	58.33	-		
D.O. (mg/L)	4.2	4.3	3.9	4.0	4.1	3.9	4.06	4.01		
Turbidity (NTU)	5.7	6.1	13.6	14.7	31.2	31.4	17.12	-		
SS (mg/L)	6.0	6.0	14.0	14.0	17.0	16.0	12.17	-		
Remarks		Dredging works was observed.								

Station			MF	B2							
Time (hh:mm)			10:22	-10:25							
Water Depth (m)			9								
Monitoring Depth (m)	1	.0	4								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.6	28.6	28.1	28.1	27.2	27.3	27.97	-			
Salinity (ppt)	17.1	17.2	20.2	20.2	24.6	24.3	20.59	-			
pH	6.9	6.9	6.9	6.9	7.0	7.0	6.92				
D.O. Saturation (%)	60.5	61.2	60.3	58.1	57.3	57.4	59.13	-			
D.O. (mg/L)	4.3	4.3	4.2	4.1	4.0	4.0	4.13	3.97			
Turbidity (NTU)	6.3	6.0	9.5	9.7	43.5	41.7	19.45	-			
SS (mg/L)	6.0	5.0	7.0	6.0	57.0	58.0	23.17	-			
Remarks		Dredging works was observed.									

Station			IV	IP						
Time (hh:mm)			10:47	-10:48						
Water Depth (m)			5							
Monitoring Depth (m)	1	.0	2							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.3	28.3	-	-	27.8	27.7	28.03	-		
Salinity (ppt)	18.7	18.3	-	-	22.5	22.6	20.51	-		
pH	7.0	7.0	-	-	7.1	7.1	7.03			
D.O. Saturation (%)	61.6	60.8	-	-	60.8	63.3	61.63	-		
D.O. (mg/L)	4.3	4.3	-	-	4.2	4.4	4.30	4.31		
Turbidity (NTU)	6.1	5.9	-	-	6.5	6.7	6.30	-		
SS (mg/L)	7.0	6.0	-	-	8.0	9.0	7.50	-		
Remarks		Dredging works was observed.								

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IIV	101	IMO2		MPB1		MPB2		MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.2	4.2	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.2	4.2	Υ	Υ	Y	N	Υ	N	Υ	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	14.5	14.5	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	10.7	10.7	N	Ν	Y	N	N	N	N	N	N	N

Sampling Date	05/09/2008
Weather & Ambient Temperature	Cloudy, 31C

Station	ı		C2 /	NM5)			1	
***************************************				-16:10				
Time (hh:mm)								
Water Depth (m)			21	.0				
Monitoring Depth (m)	1	.0	10	).5	20	0.0		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.5	29.5	27.2	27.1	26.1	26.1	27.59	-
Salinity (ppt)	17.1	17.0	25.3	25.3	28.8	28.7	23.70	-
pH	7.1	7.2	7.2	7.2	7.2	7.2	7.19	
D.O. Saturation (%)	68.0	66.4	54.6	53.0	52.8	54.5	58.22	-
D.O. (mg/L)	4.7	4.6	3.8	3.7	3.6	3.8	4.02	3.70
Turbidity (NTU)	4.9	5.0	7.9	8.2	22.7	22.1	11.80	-
SS (mg/L)	5.0	5.0	8.0	8.0	82.0	70.0	29.67	1
Remarks			D	redging wor	ks was obse	rved.		

Station			IM	01			Co-ore	dinates
Time (hh:mm)				Northing	Easting			
Water Depth (m)				22.21.385	113.53.322			
Monitoring Depth (m)	1	.0	3	.9	6	.8		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.2	29.2	27.7	27.7	27.5	27.3	28.07	-
Salinity (ppt)	16.9	17.0	22.6	22.7	23.9	23.9	21.16	-
pH	7.3	7.2	7.3	7.3	7.4	7.4	7.31	
D.O. Saturation (%)	66.6	68.3	58.8	59.0	61.2	61.9	62.63	-
D.O. (mg/L)	4.7	4.8	4.1	4.1	4.2	4.29	4.36	4.27
Turbidity (NTU)	4.8	4.9	7.3	7.5	22.1	22.3	11.48	-
SS (mg/L)	4.0	5.0	6.0	6.0	23.0	23.0	11.17	-
Remarks			D	redging wor	ks was obse	rved.		

Station			IM		Co-ord	dinates				
Time (hh:mm)			15:13	-15:15			Northing	Easting		
Water Depth (m)				22.20.939	113.58.486					
Monitoring Depth (m)	1	.0	3	.4	5	.8				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	28.7	28.9	27.7	27.8	27.6	27.6	28.05	-		
Salinity (ppt)	17.5	17.5	22.3	22.3	23.0	22.9	20.90	-		
pH	7.4	7.3	7.3	7.3	7.3	7.3	7.32			
D.O. Saturation (%)	69.8	68.9	60.5	61.7	63.9	65.5	65.05	-		
D.O. (mg/L)	4.9	4.8	4.2	4.3	4.4	4.54	4.53	4.49		
Turbidity (NTU)	5.1	5.4	8.4	8.5	12.3	12.1	8.63	-		
SS (mg/L)	5.0	6.0	13.0	8.67	-					
Remarks		Dredging works was observed.								

Station			MF	PB1			1			
Time (hh:mm)			15:34	-15:36						
Water Depth (m)										
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)	28.6	28.8	27.6	27.7	27.2	27.2	27.86	-		
Salinity (ppt)	18.3	18.2	23.0	22.8	24.8	25.0	22.01	-		
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.32			
D.O. Saturation (%)	65.1	65.7	58.7	58.2	60.5	59.4	61.27	-		
D.O. (mg/L)	4.6	4.6	4.1	4.0	4.2	4.1	4.26	4.14		
Turbidity (NTU)	4.1	4.3	7.9	8.1	29.1	30.1	13.93	-		
SS (mg/L)	4.0	5.0	7.0	8.0	34.0	32.0	15.00	-		
Remarks		Dredging works was observed.								

Station			MF	PB2						
Time (hh:mm)										
Water Depth (m)			9	.4						
Monitoring Depth (m)	1	.0	4	.7	8	.4				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	29.7	29.5	27.6	27.6	27.4	27.4	28.18	-		
Salinity (ppt)	15.2	15.3	23.2	23.1	24.5	24.3	20.93	-		
pH	7.3	7.4	7.4	7.4	7.4	7.4	7.39			
D.O. Saturation (%)	69.4	68.0	60.5	59.3	65.3	64.4	64.48	-		
D.O. (mg/L)	4.9	4.8	4.2	4.1	4.5	4.5	4.48	4.49		
Turbidity (NTU)	4.8	4.9	14.6	15.1	27.1	26.9	15.57	-		
SS (mg/L)	6.0	7.0	7.0	7.0	15.0	16.0	9.67	-		
Remarks		Dredging works was observed.								

Station			I	/IP					
Time (hh:mm)									
Water Depth (m)			6	6.0					
Monitoring Depth (m)	1	.0	3	3.0	5	.0			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom	
Water Temperature (°C)	29.0	29.0	-	-	27.7	27.7	28.33	-	
Salinity (ppt)	17.6	17.8	-	-	22.7	22.7	20.19	-	
pH	7.2	7.2	-	-	7.2	7.3	7.23		
D.O. Saturation (%)	66.8	66.4	-	-	63.5	62.6	64.83	-	
D.O. (mg/L)	4.7	4.7	-	-	4.4	4.3	4.51	4.37	
Turbidity (NTU)	4.3	4.4	-	-	16.7	16.3	10.43	-	
SS (mg/L)	5.0	4.0	-	-	13.0	12.0	8.50	-	
Remarks		Dredging works was observed.							

Compliance with Action at	Compliance with Action and Limit Level													
Parameter	As in	EM&A	C2*1	30%	IIV	IMO1		IMO2		MPB1	MF	PB2	MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.7	3.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.0	4.0	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	15.3	15.3	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	38.6	38.6	N	N	N	N	N	N	N	N	N	N

Sampling Date	05/09/2008
Weather & Ambient Temperature	Rainy, 30C

Station			C1 (	NM3)								
Time (hh:mm)			10:11	-10:14								
Water Depth (m)			16	6.2								
Monitoring Depth (m)	1	.0	8	5.2								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.0	28.0	27.6	27.7	27.4	27.3	27.65	-				
Salinity (ppt)	21.0	20.7	22.6	22.2	24.2	24.4	22.50	-				
pH	7.1	7.1	7.1	7.1	7.1	7.1	7.08					
D.O. Saturation (%)	69.1	68.7	63.7	65.9	66.8	65.2	66.57	-				
D.O. (mg/L)	4.8	4.8	4.4	4.6	4.6	4.5	4.63	4.57				
Turbidity (NTU)	4.9	4.7	7.4	7.4	17.5	16.8	9.78	-				
SS (mg/L)	4.0	6.0	10.0	8.0	22.0	19.0	11.50	-				
Remarks		Dredging works was observed.										

Station			C3 (	NM6)							
Time (hh:mm)			11:59	-12:01							
Water Depth (m)			7								
Monitoring Depth (m)	1	.0	3	.2							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	29.0	29.0	28.3	28.5	26.7	26.7	28.02	-			
Salinity (ppt)	15.1	15.1	16.2	16.2	26.0	26.2	19.14	-			
pH	6.9	7.0	7.1	7.1	7.0	7.0	7.01				
D.O. Saturation (%)	73.8	73.5	69.9	68.4	63.9	64.9	69.07	-			
D.O. (mg/L)	5.2	5.2	5.0	4.9	4.4	4.5	4.87	4.46			
Turbidity (NTU)	5.0	5.3	11.5	11.2	24.0	23.2	13.37	-			
SS (mg/L)	4.0	4.0	10.0	9.0	27.0	26.0	13.33	-			
Remarks		Dredging works was observed.									

Station			IM	01			Co-ordinate	s			
Time (hh:mm)			11:07	-11:09			Northing	Easting			
Water Depth (m)			7	.5			22.21.421	113.53.329			
Monitoring Depth (m)	1	.0	3	.5							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.7	28.7	28.0	28.0	27.6	27.6	28.08	-			
Salinity (ppt)	15.1	15.1 14.9		21.1	22.7	22.8	19.61	-			
pH	6.9	6.9	7.0	7.0	7.0	7.0	6.99				
D.O. Saturation (%)	64.9	65.5	64.0	64.2	66.8	66.6	65.33	-			
D.O. (mg/L)	4.6	4.7	4.5	4.5	4.6	4.6	4.58	4.63			
Turbidity (NTU)	6.2	6.2	5.7	5.4	16.8	16.3	9.43	-			
SS (mg/L)	5.0	5.0	6.0	6.0	6.0	5.0	5.50	-			
Remarks		Dredging works was observed.									

Station			IM	02			Co-ordinate	s			
Time (hh:mm)			11:20	-11:22			Northing	Easting			
Water Depth (m)			7	.4			22.21.039	113.53.476			
Monitoring Depth (m)	1	.0	3	.7	6	5.4					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.8	28.7	28.4	28.4	27.7	27.8	28.31	-			
Salinity (ppt)	15.3	15.3	17.9	17.9	22.1	22.1	18.44	-			
pH	6.9	6.9	7.0 7.0		7.0	7.0	6.99				
D.O. Saturation (%)	64.5	64.7	64.2	63.9	62.0	62.9	63.70	-			
D.O. (mg/L)	4.6	4.6	4.5	4.5	4.3	4.4	4.47	4.34			
Turbidity (NTU)	6.2	6.2	6.8	6.6	15.3	15.0	9.35	-			
SS (mg/L)	6.0 6.0 7.0 6.0 18.0 18.0						10.17	-			
Remarks		Dredging works was observed.									

Station			MF	PB1							
Time (hh:mm)			10:55	-10:57							
Water Depth (m)			8	.4							
Monitoring Depth (m)	1	.0	4	.4							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.8	28.8	28.2	28.2	27.3	27.3	28.11	-			
Salinity (ppt)	15.6	15.7	20.1	20.0	24.4	24.3	20.02	-			
pH	7.0	6.9	7.0	7.0	7.1	7.1	7.01				
D.O. Saturation (%)	67.2	67.7	66.6	67.0	66.0	65.7	66.70	-			
D.O. (mg/L)	4.8	4.8	4.7	4.7	4.6	4.5	4.66	4.56			
Turbidity (NTU)	6.2	6.0	5.9	5.9	8.9	9.1	7.00	-			
SS (mg/L)	6.0	6.0	8.0	14.0	9.00	-					
Remarks		Dredging works was observed.									

Station			MF	PB2							
Time (hh:mm)			11:29	-11:32							
Water Depth (m)			9	.2							
Monitoring Depth (m)	1	.0	4								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.9	28.8	27.9	27.9	27.4	27.4	28.03	-			
Salinity (ppt)	14.7	14.6	21.7	21.6	23.8	23.8	20.03	-			
pH	7.0	7.0	7.0	7.0	7.0	7.0	7.00				
D.O. Saturation (%)	66.1	65.0	61.9	62.7	63.9	64.2	63.97	-			
D.O. (mg/L)	4.7	4.6	4.3	4.3	4.4	4.5	4.47	4.44			
Turbidity (NTU)	5.9	6.3	15.1	15.5	25.3	24.5	15.43	-			
SS (mg/L)	5.0	5.0	24.0	33.0	20.83	-					
Remarks		Dredging works was observed.									

Station			IV	IP							
Time (hh:mm)			10:39	-10:41							
Water Depth (m)			5	.6							
Monitoring Depth (m)	1.	.0	2								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.6	28.6	-	-	27.4	27.4	28.00	-			
Salinity (ppt)	16.6	16.6	-	-	23.0	22.9	19.79	-			
pH	7.0	6.9	-	-	7.1	7.0	7.00				
D.O. Saturation (%)	65.2	66.6	-	-	64.5	64.4	65.18	-			
D.O. (mg/L)	4.6	4.7	-	-	4.5	4.5	4.57	4.48			
Turbidity (NTU)	5.7	5.9	-	-	37.0	36.3	21.23	-			
SS (mg/L)	6.0	6.0	-	7.0	6.75	-					
Remarks		Dredging works was observed.									

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	Mean(C1+C3)*130%		101	IMO2			MPB1	MPB2		IV	/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.5	4.5	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.7	4.7	N	N	N	N	N	N	Z	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	15.0	15.0	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	16.1	16.1	N	Ν	N	N	N	N	N	N	N	N

Sampling Date	08/09/2008
Weather & Ambient Temperature	Sunny, 30C

Station			C2 (	NM5)			1				
Time (hh:mm)			7:56	-8:01							
Water Depth (m)											
Monitoring Depth (m)	1	.0									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom			
Water Temperature (°C)	28.9	28.9	28.3	27.1	25.4	25.5	27.35	-			
Salinity (ppt)	21.0	20.9	21.8	25.4	30.9	30.3	25.03	-			
pH	7.5	7.5	7.5	7.5	7.5	7.5	7.50				
D.O. Saturation (%)	75.3	76.1	58.6	51.6	46.5	48.6	59.45	-			
D.O. (mg/L)	5.2	5.2	4.1	3.6	3.2	3.4	4.09	3.28			
Turbidity (NTU)	2.7	2.5	2.7	2.6	8.4	8.7	4.60	-			
SS (mg/L)	3.0	3.0	5.83	1							
Remarks		No dredging works was observed.									

Station			IM	01			Co-ord	dinates
Time (hh:mm)			7:16	-7:19			Northing	Easting
Water Depth (m)				22.21.385	113.53.595			
Monitoring Depth (m)	1	.0		•				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.4 28.5		27.2	27.3	26.4	26.5	27.39	-
Salinity (ppt)	17.4	17.1	24.1	23.8	28.1	28.9	23.24	-
pH	7.2	7.2	7.3	7.2	7.3	7.2	7.23	
D.O. Saturation (%)	63.5	63.6	50.6	49.6	49.8	51.6	54.78	-
D.O. (mg/L)	4.5	4.5	3.5	3.4	3.4	3.52	3.81	3.47
Turbidity (NTU)	3.5	3.9	4.1	4.2	5.0	4.8	4.25	-
SS (mg/L)	5.0	4.0	5.0	4.67	-			
Remarks			No	dredging wo	orks was obs	erved.		

Station		-	IM	02			Co-ore	dinates			
Time (hh:mm)		•	6:56	-6:58			Northing	Easting			
Water Depth (m)				22.20.854	13.53.688						
Monitoring Depth (m)	1	.0									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	28.9	28.8	27.1	27.3	26.2	26.3	27.41	-			
Salinity (ppt)	15.7	16.0	25.4	25.4	28.8	28.2	23.23	-			
pH	7.3	7.3	7.3	7.4	7.3	7.4	7.33				
D.O. Saturation (%)	61.7	63.0	58.9	52.7	51.7	53.5	56.92	-			
D.O. (mg/L)	4.4	4.5	4.1	3.6	3.6	3.68	3.96	3.62			
Turbidity (NTU)	4.1	4.2	4.2	4.1	6.1	6.4	4.85	-			
SS (mg/L)	6.0	5.0	4.33	-							
Remarks		No dredging works was observed.									

Station			MF	PB1				
Time (hh:mm)			7:25	-7:27				
Water Depth (m)								
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.9	28.9	28.5	28.0	26.6	26.5	27.92	-
Salinity (ppt)	17.2	17.1	19.2	20.0	27.0	27.4	21.33	-
pH	7.2	7.2	7.2	7.2	7.1	7.2	7.19	
D.O. Saturation (%)	71.4	70.9	59.6	58.9	50.6	50.3	60.28	-
D.O. (mg/L)	5.0	5.0	4.2	4.1	3.5	3.5	4.20	3.48
Turbidity (NTU)	4.3	3.9	5.5	5.7	9.6	9.6	6.43	-
SS (mg/L)	4.0	4.0	3.0	3.0	4.0	4.0	3.67	-
Remarks		-	No	dredging wo	orks was obs	served.	•	•

Station			M	PB2						
Time (hh:mm)			7:06	-7:08						
Water Depth (m)										
Monitoring Depth (m)	1	.0								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	28.6	28.6	28.0	28.0	27.4	27.3	27.98	-		
Salinity (ppt)	16.9	17.3	21.5	21.3	23.4	23.8	20.70	-		
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.28			
D.O. Saturation (%)	68.9	69.3	65.8	66.3	60.9	59.7	65.15	-		
D.O. (mg/L)	4.9	4.9	4.6	4.6	4.2	4.1	4.55	4.19		
Turbidity (NTU)	3.0	2.9	3.1	3.0	3.3	3.3	3.10	-		
SS (mg/L)	4.0	5.0	4.0	4.0	6.0	5.0	4.67	-		
Remarks		No dredging works was observed.								

Station			N	IP			1				
Time (hh:mm)			7:34	-7:36							
Water Depth (m)											
Monitoring Depth (m)	1	.0									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom			
Water Temperature (°C)	28.7	28.7	-	-	26.4	26.4	27.53	-			
Salinity (ppt)	17.7	17.5	-	-	27.6	27.8	22.64	-			
pH	7.3	7.3	-	-	7.4	7.4	7.33				
D.O. Saturation (%)	64.3	63.1	-	-	53.8	53.4	58.65	-			
D.O. (mg/L)	4.5	4.4	-	-	3.7	3.7	4.08	3.70			
Turbidity (NTU)	4.2	4.2	5.35	-							
SS (mg/L)	4.0	4.0	-	-	5.0	4.0	4.25	-			
Remarks		No dredging works was observed.									

Compliance with Action at	ia Limit Lev	<u>/ei</u>												
Parameter	As in	EM&A	C2*1	C2*130%		IMO1 IMO2			MPB1	MF	MPB2		MP	
	Action	Limit	Action	Limit	Limit Exceedan Exceedan		Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.3	3.3	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.1	4.1	Υ	Υ	Υ	Υ	N	N	N	N	Y	N
Turbidity (Depth-averaged)	29.0	49.0	6.0	6.0	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	7.6	7.6	N	N	N	N	N	N	N	N	N	N

Sampling Date	08/09/2008
Weather & Ambient Temperature	Fine, 29C

Station			C1 (	NM3)				
Time (hh:mm)			19:46	-19:49				
Water Depth (m)								
Monitoring Depth (m)	1	.0	8					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.8	28.7	27.1	26.8	25.2	25.5	27.02	-
Salinity (ppt)	20.7	20.9	24.6	25.8	30.6	29.9	25.41	-
pH	7.5	7.5	7.5	7.5	7.5	7.5	7.52	
D.O. Saturation (%)	74.9	76.5	51.9	51.1	49.6	49.8	58.97	-
D.O. (mg/L)	5.1	5.2	3.6	3.5	3.4	3.4	4.06	3.43
Turbidity (NTU)	2.6	2.7	3.9	3.8	8.8	8.4	5.03	-
SS (mg/L)	5.0	4.0	4.0	5.00	-			
Remarks				No dre	dging works	was observed	d.	

Station			C3 (	NM6)							
Time (hh:mm)			19:24	-19:27							
Water Depth (m)			6	.8							
Monitoring Depth (m)	1	.0	3								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.1	28.2	28.0	27.9	27.8	27.1	27.85	-			
Salinity (ppt)	17.8	17.9	18.9	18.8	19.7	20.8	18.96	-			
pH	7.2	7.2	7.1	7.2	7.0	7.2	7.18				
D.O. Saturation (%)	73.1	74.7	73.4	71.0	72.4	64.7	71.55	-			
D.O. (mg/L)	5.2	5.3	5.2	5.0	5.1	4.6	5.03	4.82			
Turbidity (NTU)	3.1	3.0	2.8	2.9	3.9	4.2	3.32	-			
SS (mg/L)	4.0	4.0	4.0	3.0	4.00	-					
Remarks		No dredging works was observed.									

Station			IM	01			Co-ordinate	s			
Time (hh:mm)			18:50	-18:52			Northing	Easting			
Water Depth (m)			7	.8			22.21.625	113.52.904			
Monitoring Depth (m)	1	.0	3								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.8	28.7	28.3	28.6	26.3	26.3	27.84	-			
Salinity (ppt)	16.8	17.1	18.9	17.7	27.3	27.4	20.88	-			
pH	7.3	7.2	7.3	7.3	7.3	7.2	7.26				
D.O. Saturation (%)	70.8	71.2	62.7	60.3	52.5	50.5	61.33	-			
D.O. (mg/L)	5.0	5.0	4.4	4.2	3.6	3.5	4.27	3.55			
Turbidity (NTU)	5.4	5.6	8.7	8.2	8.9	8.6	7.57	-			
SS (mg/L)	5.0	6.0	5.0	4.0	4.83	-					
Remarks		No dredging works was observed.									

Station			IM	02			Co-ordinate:	S			
Time (hh:mm)			19:09	-19:11			Northing	Easting			
Water Depth (m)			7	.1			22.21.197	113.53.707			
Monitoring Depth (m)	1	.0	3								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.5	28.3	27.8	27.7	27.1	27.1	27.73	-			
Salinity (ppt)	16.9	17.1	21.4	21.5	24.0	23.9	20.80	-			
pH	7.2	7.2	7.3	7.23							
D.O. Saturation (%)	68.9	69.2	66.9	67.2	60.1	61.4	65.62	-			
D.O. (mg/L)	4.9	4.9	4.7	4.7	4.2	4.3	4.58	4.22			
Turbidity (NTU)	3.2	3.4	3.2	3.0	3.4	3.6	3.30	-			
SS (mg/L)	5.0	4.0	4.0	4.0	4.00	-					
Remarks		No dredging works was observed.									

Station			MF	PB1						
Time (hh:mm)			18:41	-18:44						
Water Depth (m)			8							
Monitoring Depth (m)	1	.0	4							
Trial	Trial 1	Trial 2	Depth-averaged	Bottom						
Water Temperature (°C)	28.3	28.3	27.17	-						
Salinity (ppt)	17.3	16.8	22.60	-						
pH	7.2	7.2	7.3	7.3	7.3	7.3	7.27			
D.O. Saturation (%)	62.9	62.7	48.9	48.4	48.0	49.6	53.42	-		
D.O. (mg/L)	4.4	4.4	3.4	3.4	3.3	3.4	3.73	3.37		
Turbidity (NTU)	3.7	3.9	3.8	6.7	4.73	-				
SS (mg/L)	4.0	4.0	4.0	4.0	3.83	-				
Remarks		No dredging works was observed.								

Station			MF	PB2						
Time (hh:mm)			19:00	-19:04						
Water Depth (m)			9							
Monitoring Depth (m)	1	.0	4							
Trial	Trial 1	Trial 2	Depth-averaged	Bottom						
Water Temperature (°C)	28.6	28.5	26.9	27.1	25.7	25.5	27.06	-		
Salinity (ppt)	15.7	16.3	25.8	23.97	-					
pH	7.3	7.3	7.4	7.29						
D.O. Saturation (%)	63.8	63.4	57.1	57.83	-					
D.O. (mg/L)	4.5	4.5	4.01	3.64						
Turbidity (NTU)	4.3	4.3	4.0	5.28	-					
SS (mg/L)	3.0	3.0	4.0	4.0	5.0	6.0	4.17	-		
Remarks		No dredging works was observed.								

Station			IV	IP								
Time (hh:mm)			18:32	-18:34								
Water Depth (m)			5									
Monitoring Depth (m)	1	.0	2									
Trial	Trial 1	Trial 2	Depth-averaged	Bottom								
Water Temperature (°C)	28.5	28.5	-	27.34	-							
Salinity (ppt)	17.4	17.3	-	22.59	-							
pH	7.2	7.3	-	7.3	7.28							
D.O. Saturation (%)	66.2	.2 64.6 50.7 49.4 57.73										
D.O. (mg/L)	4.7	4.7 4.5 3.5 3.4 4.02 3.4										
Turbidity (NTU)	4.4	4.4 4.1 7.1 6.9 5.63 -										
SS (mg/L)	4.0	4.0   4.0     5.0   6.0   4.75   -										
Remarks		No dredging works was observed.										

Compliance with Action an	d Limit Lev	el												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IIV	101	IMO2		MPB1		MPB2		IV	/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.1	4.1	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.5	4.5	N	N	N	N	Υ	Y	Υ	N	Y	N
Turbidity (Depth-averaged)	29.0	49.0	5.4	5.4	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	5.9	5.9	N	Ν	N	N	N	N	N	N	N	N

Sampling Date	09/09/2008
Weather & Ambient Temperature	Fine, 30C

Station			C2 (	NM5)			1		
Time (hh:mm)			9:18	-9:20					
Water Depth (m)									
Monitoring Depth (m)	1	.0							
Trial	Trial 1	Trial 2	Trial 1	al 1 Trial 2	Trial 1	Trial 2	Depth-	Bottom	
			averaged						
Water Temperature (°C)	28.5	28.4	26.9	26.8	26.0	26.2	27.12	-	
Salinity (ppt)	21.8	21.9	26.05	-					
pH	7.6	7.6	7.49						
D.O. Saturation (%)	88.7	89.2	66.10	-					
D.O. (mg/L)	6.1	6.1	4.54	3.64					
Turbidity (NTU)	3.7	3.8	5.08	-					
SS (mg/L)	6.0	5.0	8.0	10.0	8.0	8.0	7.50	-	
Remarks		No dredging works was observed.							

1-													
Station			IM	01			Co-ore	dinates					
Time (hh:mm)			8:26	-8:28			Northing	Easting					
Water Depth (m)		19.8 22.21.689 113											
Monitoring Depth (m)	1	.0		3									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom					
							averaged						
Water Temperature (°C)	28.5	28.6	26.2	26.3	24.9	25.1	26.60	-					
Salinity (ppt)	21.1	20.8	28.8	28.7	31.9	31.5	27.15	-					
pH	7.4	7.4 7.4 7.4 7.3 7.4 7.3					7.37						
D.O. Saturation (%)	74.4	71.7	43.2	41.1	44.0	47.4	53.63	-					
D.O. (mg/L)	5.1	5.0	3.0	2.8	3.0	3.27	3.70	3.16					
Turbidity (NTU)	3.7	3.8	3.9	4.0	4.6	4.9	4.15	-					
SS (mg/L)	6.0	4.0	7.0	6.0	5.0	5.0	5.50	-					
Remarks	No dredging works was observed.												

Station			IM	02			Co-ord	dinates
Time (hh:mm)			8:16	-8:19			Northing	Easting
Water Depth (m)				22.21.879	113.54.622			
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 1 Trial 2 T		Trial 2	Trial 1	Trial 2	Depth-	Bottom
Water Temperature (°C)	28.5	28.3	27.1	27.1	26.2	26.2	27.23	-
Salinity (ppt)	22.4	22.6	26.1	26.1	28.6	28.6	25.73	-
pH	7.5	7.5	7.5	7.5	7.4	7.4	7.49	
D.O. Saturation (%)	80.1	77.4	60.9	62.0	51.6	53.5	64.25	-
D.O. (mg/L)	5.5	5.3	4.42	3.62				
Turbidity (NTU)	3.0	3.1	3.85	-				
SS (mg/L)	4.0	4.0	4.67	-				
Remarks	No dredging works was observed.							

Station			MF	PB1			1		
Time (hh:mm)			8:51	-8:54					
Water Depth (m)									
Monitoring Depth (m)	1	.0							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom	
							averaged		
Water Temperature (°C)	29.8	29.4	27.8	27.6	26.8	27.0	28.05	-	
Salinity (ppt)	12.6	13.4	20.49	-					
pH	7.2	7.2 7.3 7.3 7.3 7.2 7.2							
D.O. Saturation (%)	74.7	72.7	58.2	58.4	55.1	55.0	62.35	-	
D.O. (mg/L)	5.3	5.2	4.36	3.81					
Turbidity (NTU)	6.0	5.6	4.62	-					
SS (mg/L)	6.0	8.0	4.0	4.0	4.0	4.0	5.00	-	
Remarks		No dredging works was observed.							

Station			MI	PB2							
Time (hh:mm)			8:42	-8:44							
Water Depth (m)		9.0									
Monitoring Depth (m)	1	.0									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	28.9	29.0	27.8	27.6	26.3	26.3	27.64	-			
Salinity (ppt)	15.7	15.7 15.5 21.1 22.6 27.3 28.4						-			
pH	7.4	7.4	7.3	7.3	7.3	7.3	7.33				
D.O. Saturation (%)	71.1	71.1 71.4 53.1 52.4 49.1 50.1									
D.O. (mg/L)	5.0	5.0 5.1 3.7 3.6 3.4 3.5									
Turbidity (NTU)	4.2	4.5	3.2	3.2	3.7	3.9	3.78	=			
SS (mg/L)	5.0	4.0	4.0	3.0	6.0	4.0	4.33	-			
Remarks	No dredging works was observed.										

Station			N	IP						
Time (hh:mm)			9:00	-9:01						
Water Depth (m)										
Monitoring Depth (m)	1	.0								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom		
Water Temperature (°C)	29.1	29.1	-	-	26.6	26.7	27.88	-		
Salinity (ppt)	16.9	16.7	-	-	27.3	27.3	22.04	-		
pH	7.5	7.5 7.4 7.4 7.3								
D.O. Saturation (%)	70.7	72.1	66.53	-						
D.O. (mg/L)	5.0	5.0 5.1 4.3 4.2 4.62								
Turbidity (NTU)	5.0 4.9 6.7 6.3					5.73	-			
SS (mg/L)	5.0	4.0	-	-	6.0	7.0	5.50	-		
Remarks		No dredging works was observed.								

Compliance with Action at	mphance with Action and Limit Level													
Parameter	As in	EM&A	C2*1	30%	IM	01	IM	02		MPB1	MF	B2	IV	(P
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.6	3.6	Y	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.5	4.5	Υ	Y	N	N	N	N	Υ	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	6.6	6.6	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	9.8	9.8	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/09/2008
Weather & Ambient Temperature	Fine, 29C

Station			C1 (	NM3)						
Time (hh:mm)			21:18	-21:21						
Water Depth (m)			16	5.2						
Monitoring Depth (m)	1	.0	8							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.1	28.3	26.8	26.3	26.1	25.9	26.90	-		
Salinity (ppt)	22.6	22.2	27.3	28.9	29.3	30.0	26.73	-		
pH	7.6	7.6	7.4	7.4	7.4	7.4	7.46			
D.O. Saturation (%)	88.4	89.1	55.5	53.8	50.4	51.7	64.82	-		
D.O. (mg/L)	6.1	6.1	3.8	3.7	3.5	3.6	4.46	3.51		
Turbidity (NTU)	4.8	4.5	5.9	6.1	14.7	14.9	8.48	-		
SS (mg/L)	6.0	7.0	8.0	6.0	33.0	29.0	14.83	-		
Remarks		No dredging works was observed.								

Station			C3 (	NM6)							
Time (hh:mm)			20:33	-20:35							
Water Depth (m)			6	.6							
Monitoring Depth (m)	1	.0	3								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	29.1	28.9	28.5	28.4	26.7	28.1	28.28	-			
Salinity (ppt)	15.4	15.7	18.4	18.9	26.8	20.6	19.29	-			
pH	7.6	7.6	7.6	7.6	7.5	7.6	7.60				
D.O. Saturation (%)	83.1	81.2	78.0	79.5	79.3	78.9	80.00	-			
D.O. (mg/L)	5.9	5.7	5.5	5.6	5.5	5.5	5.60	5.49			
Turbidity (NTU)	2.5	2.6	2.8	3.0	3.5	3.3	2.95	-			
SS (mg/L)	4.0	6.0	4.0	6.0	4.0	5.0	4.83	-			
Remarks		No dredging works was observed.									

Station			IM	01			Co-ordinates			
Time (hh:mm)			20:53	-20:57			Northing	Easting		
Water Depth (m)			20	0.2			22.21.687	113.55.180		
Monitoring Depth (m)	1	.0	10	0.1	19	9.2				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.0	27.6	26.4	26.4	25.2	25.4	26.50	-		
Salinity (ppt)	22.7	24.4	28.1	28.2	31.5	30.6	27.58	-		
pH	7.4 7.4		7.4	7.4	7.5	7.4	7.41			
D.O. Saturation (%)	69.3	65.1	47.3	44.5	42.7	44.4	52.22	-		
D.O. (mg/L)	4.8	4.5	3.3	3.1	2.9	3.1	3.60	3.00		
Turbidity (NTU)	3.5	3.6	3.3	3.1	4.6	4.4	3.75	-		
SS (mg/L)	4.0	4.0     4.0     6.0     5.0     5.0     5.0     4.83								
Remarks		No dredging works was observed.								

Station			IIV	102			Co-ordinate	es		
Time (hh:mm)			21:03	-21:05			Northing	Easting		
Water Depth (m)			1:	2.1			22.21.877	113.55.693		
Monitoring Depth (m)	1	.0	6	5.0	1					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.4	28.4	26.7	26.9	26.2	26.2	27.13	-		
Salinity (ppt)	22.6	22.5	27.3	26.6	28.7	28.7	26.07	-		
pH	7.5	7.5	7.5	7.5	7.4	7.4	7.46			
D.O. Saturation (%)	83.0	79.6	58.0	60.1	50.0	55.5	64.37	-		
D.O. (mg/L)	5.7	5.5	4.0	4.1	3.4	3.8	4.42	3.63		
Turbidity (NTU)	2.9	2.9	3.3	3.3	5.2	5.4	3.83	-		
SS (mg/L)	6.0	4.0	6.0	5.0	4.0	5.0	5.00	-		
Remarks		No dredging works was observed.								

Station			MF	PB1						
Time (hh:mm)			20:10	-20:12						
Water Depth (m)			8	.4						
Monitoring Depth (m)	1	.0	4	.2	7	'.4				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	29.6	30.0	27.9	28.1	27.2	26.9	28.28	-		
Salinity (ppt)	12.7	12.6	22.0	20.7	23.3	26.5	19.63	-		
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.29			
D.O. Saturation (%)	72.4	72.9	59.8	59.4	54.9	56.5	62.65	-		
D.O. (mg/L)	5.1	5.1	4.2	4.1	3.8	3.9	4.38	3.86		
Turbidity (NTU)	6.0	5.9	3.2	3.4	3.8	3.4	4.28	-		
SS (mg/L)	6.0	5.0	5.0	6.0	5.0	4.0	5.17	-		
Remarks		No dredging works was observed.								

Station			MF	PB2						
Time (hh:mm)			20:19	-20:22						
Water Depth (m)			9	.2						
Monitoring Depth (m)	1	.0	4							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.7	29.1	27.7	27.9	26.3	26.2	27.62	-		
Salinity (ppt)	16.6	14.4	22.5	24.3	28.4	28.7	22.47	-		
pH	7.3	7.4	7.4	7.3	7.3	7.3	7.31			
D.O. Saturation (%)	71.9	74.6	55.8	54.6	48.4	45.0	58.38	-		
D.O. (mg/L)	5.1	5.3	3.9	3.8	3.3	3.1	4.07	3.22		
Turbidity (NTU)	4.3	4.7	3.6	3.4	4.5	4.7	4.20	-		
SS (mg/L)	4.0	5.0	5.0	5.0	4.0	5.0	4.67	-		
Remarks		No dredging works was observed.								

Station			IV	IP						
Time (hh:mm)			20:01	-20:02						
Water Depth (m)			5	.6						
Monitoring Depth (m)	1	.0	2							
Trial	Trial 1	Trial 2	Trial 1	Depth-averaged	Bottom					
Water Temperature (°C)	29.1	29.1	-	-	26.6	26.6	27.86	-		
Salinity (ppt)	16.4	16.6	-	-	27.4	26.6	21.74	-		
pH	7.4	7.4 7.4 7.3 7.3								
D.O. Saturation (%)	70.9	71.9	-	-	60.0	61.2	66.00	-		
D.O. (mg/L)	5.0	5.0	-	-	4.1	4.2	4.59	4.18		
Turbidity (NTU)	5.4	5.2	-	6.15	-					
SS (mg/L)	4.0	4.0 4.0 5.0 5.0 4.50								
Remarks		No dredging works was observed.								

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IM	101	IMO2			MPB1	MF	PB2	IV	IP .
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.5	4.5	Υ	N	N	N	N	N	Υ	N	N	N
DO (Depth-averaged)	4.2	4.0	5.0	5.0	Υ	Υ	N	N	N	N	Υ	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	7.4	7.4	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	12.8	12.8	N	N	N	N	N	N	N	N	N	N

Sampling Date	10/09/2008
Weather & Ambient Temperature	Fine, 30C

Station			C2 (	NM5)			1	
Time (hh:mm)			10:21	-10:24			1	
Water Depth (m)								
Monitoring Depth (m)	1	.0	9	.8	18	3.6		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
			averaged					
Water Temperature (°C)	28.0	28.1	26.7	26.6	25.0	24.8	26.53	-
Salinity (ppt)	23.0	22.8	27.5	27.8	31.9	32.3	27.56	-
pH	8.2	8.3	7.9	7.9	7.9	7.9	7.98	
D.O. Saturation (%)	98.9	99.6	51.8	50.9	47.6	47.5	66.05	-
D.O. (mg/L)	6.8	6.9	3.6	3.5	3.3	3.3	4.55	3.28
Turbidity (NTU)	2.8	2.8	3.5	3.4	6.3	6.5	4.22	-
SS (mg/L)	10.0	13.0	10.0	8.33	-			
Remarks			D	redging wor	ks was obse	rved.	•	

Station			IM	01			Co-ore	dinates			
Time (hh:mm)			9:28	-9:31			Northing	Easting			
Water Depth (m)				22.21.991	113.55.215						
Monitoring Depth (m)	1	.0		•							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	28.7	28.7	27.0	26.5	25.9	26.6	27.22	-			
Salinity (ppt)	19.9	20.1	27.6	28.0	30.7	30.1	26.04	-			
pH	8.0	8.0	7.7	7.7	7.7	7.7	7.78				
D.O. Saturation (%)	95.2	93.0	51.7	45.8	45.0	46.5	62.87	-			
D.O. (mg/L)	6.6	6.4	3.5	3.2	3.1	3.15	4.32	3.12			
Turbidity (NTU)	3.5	3.8	5.3	5.2	5.8	5.9	4.92	-			
SS (mg/L)	6.0	6.0	6.0	7.0	8.0	8.0	6.83	-			
Remarks		Dredging works was observed.									

Station			IM		Co-ore	dinates			
Time (hh:mm)			9:17	-9:21			Northing	Easting	
Water Depth (m)			12	2.4			22.21.663	113.55.895	
Monitoring Depth (m)	1.	.0							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom	
							averaged		
Water Temperature (°C)	28.4	28.0	26.3	26.3	26.1	25.6	26.77	-	
Salinity (ppt)	20.3	21.5	28.9	28.9	29.6	31.0	26.68	-	
pH	7.9	7.8	7.6	7.7	7.6	7.7	7.72		
D.O. Saturation (%)	82.3	80.6	45.1	45.8	47.9	48.9	58.43	-	
D.O. (mg/L)	5.7	5.6	3.1	3.1	3.3	3.35	4.03	3.32	
Turbidity (NTU)	3.5	3.9	2.8	3.0	3.8	4.1	3.52	-	
SS (mg/L)	6.0	6.0	4.0	5.00	-				
Remarks		Dredging works was observed.							

Station			MF	PB1			1	
Time (hh:mm)			9:52	-9:54				
Water Depth (m)								
Monitoring Depth (m)	1	.0	4	.6	8	3.2		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	29.3	29.1	27.8	27.8	27.3	27.6	28.15	-
Salinity (ppt)	13.4	14.7	21.9	22.0	24.4	23.7	20.02	-
pH	8.1	8.0	7.8	7.8	7.8	7.8	7.88	
D.O. Saturation (%)	96.8	93.9	68.5	69.2	68.4	68.8	77.60	-
D.O. (mg/L)	6.9	6.7	4.8	4.8	4.7	4.8	5.43	4.74
Turbidity (NTU)	3.6	3.3	2.6	2.8	3.4	3.7	3.23	-
SS (mg/L)	5.0	6.0	5.0	5.0	5.0	5.0	5.17	-
Remarks		-	D	redging wor	ks was obse	rved.		•

Station			MF	PB2							
Time (hh:mm)			9:43	-9:45							
Water Depth (m)											
Monitoring Depth (m)	1	.0	4	.3	7	.6					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	28.8	28.9	28.4	28.5	26.3	26.3	27.86	-			
Salinity (ppt)	16.5	15.2	18.7	18.5	28.6	28.3	20.96	-			
pH	8.0	8.0	8.0	8.0	7.7	7.6	7.89				
D.O. Saturation (%)	100.0	96.9	77.7	73.1	59.7	54.3	76.95	-			
D.O. (mg/L)	7.1	6.9	5.4	5.1	4.1	3.7	5.39	3.92			
Turbidity (NTU)	3.5	3.5	3.7	3.8	5.1	5.4	4.17	-			
SS (mg/L)	6.0	6.0	5.0	6.0	5.0	6.0	5.67	-			
Remarks		Dredging works was observed.									

Station			N	IP			1	
Time (hh:mm)			10:01	-10:02				
Water Depth (m)								
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	29.0	29.0	-	-	27.4	27.1	28.11	-
Salinity (ppt)	17.7	17.8	-	-	24.4	25.7	21.40	-
pH	7.9	8.0	-	-	7.7	7.5	7.77	
D.O. Saturation (%)	94.5	97.8	-	-	71.2	71.8	83.83	-
D.O. (mg/L)	6.6	6.8	-	-	4.9	5.0	5.82	4.93
Turbidity (NTU)	4.3	3.9	-	-	6.0	6.2	5.10	-
SS (mg/L)	5.0	5.0	-	-	8.0	7.0	6.25	-
Remarks		•	D	redging wor	ks was obse	rved.		

Compliance with Action at	ia Limit Lev	<u>/ei</u>												
Parameter	As in	EM&A	C2*1	30%	IM	IMO1		IMO2		MPB1	MF	B2	MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.3	3.3	Y	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.5	4.5	N	N	Υ	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	5.5	5.5	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	10.8	10.8	N	N	N	N	N	N	N	N	N	N

Sampling Date	10/09/2008
Weather & Ambient Temperature	Sunny, 29C

Station			C1 (	NM3)				
Time (hh:mm)			22:11					
Water Depth (m)			16	6.8				
Monitoring Depth (m)	1	.0	8	3.4	15	5.8		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	27.7	27.7	26.6	26.6	25.0	24.7	26.38	-
Salinity (ppt)	23.2	23.1	27.1	27.4	31.6	32.1	27.42	-
pH	8.1	8.1	7.8	7.8	7.7	7.8	7.88	
D.O. Saturation (%)	97.9	96.5	53.1	54.7	48.5	47.4	66.35	-
D.O. (mg/L)	6.8	6.7	3.7	3.8	3.3	3.3	4.57	3.31
Turbidity (NTU)	3.0	3.1	3.1	3.3	6.7	7.0	4.37	-
SS (mg/L)	8.0	7.0	6.0	5.0	10.0	11.0	7.83	-
Remarks				Dredo	ging works w	as observed.		

Station			C3 (	NM6)				
Time (hh:mm)			21:02					
Water Depth (m)			6	.8				
Monitoring Depth (m)	1	.0	3	.4	5	.8		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.9	29.0	28.6	28.9	27.6	28.1	28.51	-
Salinity (ppt)	17.4	17.2	17.9	16.4	22.0	21.3	18.68	-
pH	8.1	8.2	8.1	8.2	7.8	7.8	8.03	
D.O. Saturation (%)	124.6	125.5	114.0	114.3	104.6	113.4	116.07	-
D.O. (mg/L)	8.7	8.8	8.0	8.0	7.3	7.9	8.09	7.56
Turbidity (NTU)	3.3	3.6	4.8	4.8	8.7	8.1	5.55	-
SS (mg/L)	6.0	6.0	6.0	6.0	5.0	4.0	5.50	-
Remarks				Dredo	jing works w	as observed.		

Station			IM	01			Co-ordinate:	5
Time (hh:mm)			21:49	-21:52			Northing	Easting
Water Depth (m)			19	9.2			22.21.994	113.55.212
Monitoring Depth (m)	1	.0	9	.6	18	3.2		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.5	28.4	26.2	26.4	25.3	26.4	26.86	-
Salinity (ppt)	20.3	21.4	28.3	27.5	31.2	30.5	26.53	-
pH	7.9	7.9	7.6	7.7	7.6	7.6	7.69	
D.O. Saturation (%)	89.2	88.5	45.6	48.0	44.9	45.5	60.28	-
D.O. (mg/L)	6.2	6.1	3.1	3.3	3.1	3.1	4.14	3.09
Turbidity (NTU)	3.7	4.1	5.8	6.1	6.6	6.3	5.43	-
SS (mg/L)	8.0	7.0	9.0	9.0	9.0	7.0	8.17	-
Remarks				Dredg	ging works w	as observed.		

Station			IM	02			Co-ordinate	S		
Time (hh:mm)			21:59	-22:02			Northing	Easting		
Water Depth (m)			13	22.21.665	113.55.897					
Monitoring Depth (m)	1	.0	6							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	27.8	26.9	26.2	26.2	25.4	25.5	26.33	-		
Salinity (ppt)	21.1	25.8	28.6	28.7	30.7	30.6	27.58	-		
pH	8.0	7.7	7.7	7.7	7.7	7.7	7.72			
D.O. Saturation (%)	71.1	71.3	44.3	43.7	46.0	45.2	53.60	-		
D.O. (mg/L)	5.0	4.9	3.0	3.0	3.2	3.1	3.69	3.13		
Turbidity (NTU)	3.9	3.6	3.4	3.2	7.1	7.6	4.80	-		
SS (mg/L)	6.0	7.0	4.0	4.0	5.0	6.0	5.33	-		
Remarks		Dredging works was observed.								

Station			MF	PB1					
Time (hh:mm)			21:27						
Water Depth (m)			9						
Monitoring Depth (m)	1	.0	4						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	28.9	28.8	27.3	27.4	27.3	27.1	27.79	-	
Salinity (ppt)	16.1	15.3	24.0	23.3	24.4	24.9	21.33	-	
pH	8.0	8.1	7.7	7.8	7.8	7.7	7.83		
D.O. Saturation (%)	94.4	95.9	64.2	66.1	67.6	62.9	75.18	-	
D.O. (mg/L)	6.6	6.8	4.4	4.6	4.7	4.3	5.24	4.50	
Turbidity (NTU)	3.4	3.5	3.0	2.9	3.3	3.3	3.23	-	
SS (mg/L)	5.0	6.0	3.0	4.0	4.0	4.0	4.33	-	
Remarks		Dredging works was observed.							

Station			MF	PB2						
Time (hh:mm)			21:18							
Water Depth (m)			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)	28.8	28.8	28.3	27.5	26.1	26.2	27.61	-		
Salinity (ppt)	14.8	16.8	18.2	23.0	28.5	28.1	21.55	-		
pH	8.0	8.0	8.0	7.9	7.7	7.7	7.89			
D.O. Saturation (%)	99.3	97.2	77.1	71.0	53.6	59.8	76.33	-		
D.O. (mg/L)	7.0	6.8	5.4	4.9	3.7	4.1	5.33	3.91		
Turbidity (NTU)	3.6	3.5	3.7	4.0	5.1	4.9	4.13	-		
SS (mg/L)	8.0	8.0	5.0	4.0	7.0	6.0	6.33	-		
Remarks		Dredging works was observed.								

Station			IV	IP					
Time (hh:mm)			21:35						
Water Depth (m)			5						
Monitoring Depth (m)	1	.0	2	.8					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	28.9	28.9	-	-	26.7	26.6	27.75	-	
Salinity (ppt)	17.7 17.6 26.5 26.7						22.13	-	
pH	8.0	8.0	-	-	7.7	7.7	7.84		
D.O. Saturation (%)	96.2	94.5	-	-	73.3	65.4	82.35	-	
D.O. (mg/L)	6.7	6.6	-	-	5.1	4.5	5.71	4.78	
Turbidity (NTU)	5.1	5.3	-	-	12.3	12.7	8.85	-	
SS (mg/L)	6.0	6.0	-	-	6.0	6.0	6.00	-	
Remarks		Dredging works was observed.							

Compliance with Action an	d Limit Lev	el												
Parameter	As in	EM&A	Mean(C1-	Mean(C1+C3)*130%		IO1	IMO2		MPB1		MPB2		MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	an Exceedance of Action Exceedance I		Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	5.4	5.4	Υ	N	Υ	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	6.3	6.3	Υ	N	Υ	Υ	N	N	Z	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	6.4	6.4	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	8.7	8.7	N	N	N	N	N	N	N	N	N	N

Sampling Date	11/09/2008
Weather & Ambient Temperature	Cloudy, 30C

Station			C2 (	NM5)			1					
Time (hh:mm)			9:49	-9;52								
Water Depth (m)												
Monitoring Depth (m)	1	.0	9.6									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom				
Water Temperature (°C)	29.8	29.7	27.0	27.0	25.6	25.6	27.44	-				
Salinity (ppt)	10.2	10.3	25.5	25.4	30.3	30.4	22.01	-				
pH	7.4	7.4	7.5	7.5	7.3	7.3	7.40					
D.O. Saturation (%)	82.6	82.8	53.4	54.8	45.7	46.8	61.02	-				
D.O. (mg/L)	5.9	5.9	3.7	3.8	3.1	3.2	4.28	3.18				
Turbidity (NTU)	6.9	6.6	3.5	3.6	7.5	7.6	5.95	-				
SS (mg/L)	5.0	6.0	6.0	5.0	4.0	4.0	5.0	-				
Remarks			No dredging works was observed.									

Station			IM	01			Co-ore	dinates
Time (hh:mm)			9:23	-9:27			Northing	Easting
Water Depth (m)			22.22.055	113.55.239				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.6	28.5	26.3	26.3	25.2	25.2	26.68	-
Salinity (ppt)	17.6	17.7	29.3	29.3	31.5	31.5	26.15	-
pH	7.8	7.7	7.8	7.8	7.7	7.7	7.74	
D.O. Saturation (%)	71.8	72.1	41.9	42.8	39.5	38.3	51.07	-
D.O. (mg/L)	5.1	5.1	2.9	2.9	2.7	2.63	3.55	2.68
Turbidity (NTU)	5.1	4.8	7.4	7.1	10.8	11.2	7.73	-
SS (mg/L)	5.0	6.0	12.0	10.0	9.0	8.0	8.3	-
Remarks			No	dredging wo	orks was obs	served.		-

Station			IM	02			Co-ord	dinates
Time (hh:mm)			9:11	-9:14			Northing	Easting
Water Depth (m)			22.21.619	113.55.933				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.9	28.8	26.2	26.3	25.5	25.5	26.87	-
Salinity (ppt)	19.2	19.1	29.0	29.0	31.0	31.0	26.39	-
pH	7.7	7.7	7.7	7.7	7.6	7.6	7.67	
D.O. Saturation (%)	74.0	74.2	45.7	46.4	42.0	42.8	54.18	-
D.O. (mg/L)	5.2	5.2	3.1	3.2	2.9	2.94	3.76	2.92
Turbidity (NTU)	5.6	5.5	2.6	2.9	7.6	7.4	5.27	-
SS (mg/L)	7.0	8.0	11.0	11.0	6.0	6.0	8.2	-
Remarks	No dredging works was observed							

Station			MF	PB1			]	
Time (hh:mm)			10:14	-10:17				
Water Depth (m)								
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.9	28.9	27.6	27.5	27.0	27.0	27.82	-
Salinity (ppt)	12.4	12.5	22.2	22.3	25.5	25.7	20.10	-
pH	7.4	7.4	7.4	7.5	7.4	7.5	7.43	
D.O. Saturation (%)	71.9	72.0	59.8	59.7	56.2	57.1	62.78	-
D.O. (mg/L)	5.2	5.2	4.2	4.2	3.9	3.9	4.42	3.91
Turbidity (NTU)	6.3	6.4	5.4	5.5	5.7	5.6	5.82	-
SS (mg/L)	6.0	5.0	6.5	-				
Remarks		•	No	dredging wo	orks was obs	erved.		

Station			MF	PB2					
Time (hh:mm)			10:23	-10:26					
Water Depth (m)									
Monitoring Depth (m)	1	.0							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom	
							averaged		
Water Temperature (°C)	28.9	28.9	28.6	28.7	26.5	26.5	28.01	-	
Salinity (ppt)	13.3	13.4	15.0	15.0	28.1	28.2	18.83	-	
pH	7.6	7.6	7.6	7.6	7.5	7.5	7.56		
D.O. Saturation (%)	75.1	75.5	65.1	63.6	53.4	54.5	64.53	-	
D.O. (mg/L)	5.4	5.4	4.6	4.5	3.7	3.7	4.57	3.70	
Turbidity (NTU)	5.7	5.6	5.0	5.2	10.8	11.3	7.27	-	
SS (mg/L)	5.0	6.0	4.0	5.0	6.0	5.2	-		
Remarks	No dredging works was observed.								

Station			N	/IP						
Time (hh:mm)			10:05	-10:07						
Water Depth (m)										
Monitoring Depth (m)	1	.0								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	28.7	28.7	-	-	27.3	27.3	28.03	-		
Salinity (ppt)	16.0	15.9	-	-	24.5	24.6	20.25	-		
pH	7.7	7.6	-	-	7.4	7.4	7.51			
D.O. Saturation (%)	77.2	77.8	-	-	67.5	68.0	72.63	-		
D.O. (mg/L)	5.4	5.5	-	-	4.7	4.7	5.08	4.68		
Turbidity (NTU)	5.3	5.0	-	-	11.2	11.6	8.28	-		
SS (mg/L)	5.0	7.0	-	-	7.0	7.0	6.5	-		
Remarks	No dredging works was observed.									

Compliance with Action an	Compliance with Action and Limit Level													
Parameter	As in	EM&A	C2*1	30%	IIV	IMO1 IMO2				MPB1	MPB2		MP	
	Action Limit		Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc Exceedance of Limit Level		Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.2	3.2	Υ	N	Y	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.3	4.3	Υ	Υ	Υ	Υ	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	7.7	7.7	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	6.5	6.5	N	N	N	N	N	N	N	N	N	N

Sampling Date	11/09/2008
Weather & Ambient Temperature	Fine, 30C

Station			C1 (	NM3)								
Time (hh:mm)			18:33	-18:36								
Water Depth (m)			16									
Monitoring Depth (m)	1	.0	8	5.0								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.2	28.2	26.6	26.6	24.9	24.9	26.56	-				
Salinity (ppt)	21.8	21.8	28.3	28.4	32.0	32.0	27.37	-				
pH	7.9	7.9	7.7	7.7	7.7	7.6	7.73					
D.O. Saturation (%)	83.3	81.1	54.4	55.4	47.1	46.2	61.25	-				
D.O. (mg/L)	5.8	5.6	3.7	3.8	3.3	3.2	4.22	3.22				
Turbidity (NTU)	3.7	3.5	3.5	3.6	14.4	14.5	7.20	-				
SS (mg/L)	9.0	7.0	7.0	8.0	6.0	8.0	7.50	-				
Remarks		No dredging works was observed.										

Station			C3 (	NM6)								
Time (hh:mm)			17:16	-17:19								
Water Depth (m)			6									
Monitoring Depth (m)	1	.0	3									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	29.3	29.3	29.0	29.0	28.9	28.8	29.05	-				
Salinity (ppt)	11.6	11.6	13.7	13.9	14.9	15.0	13.44	-				
pH	7.5	7.4	7.6	7.6	7.6	7.6	7.54					
D.O. Saturation (%)	82.0	82.2	86.6	86.1	92.2	91.6	86.78	-				
D.O. (mg/L)	5.9	5.9	6.2	6.2	6.6	6.5	6.20	6.54				
Turbidity (NTU)	5.6	5.8	6.8	6.5	11.1	11.5	7.88	-				
SS (mg/L)	6.0	6.0	7.0	6.0	7.0	6.0	6.33	-				
Remarks		No dredging works was observed.										

Station			IM	101			Co-ordinate	s
Time (hh:mm)			18:03	-18:06			Northing	Easting
Water Depth (m)			19	9.2			22.21.932	113.55.219
Monitoring Depth (m)	1	.0	9	0.6	18	3.2		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.6	28.7	26.5	26.5	25.5	25.6	26.89	-
Salinity (ppt)	19.5	19.4	28.3	28.4	31.0	30.7	26.22	-
pH	7.8	7.8	7.6	7.6	7.6	7.5	7.63	
D.O. Saturation (%)	80.2	79.3	45.6	46.1	54.4	52.7	59.72	-
D.O. (mg/L)	5.6	5.5	3.1	3.2	3.7	3.6	4.12	3.68
Turbidity (NTU)	6.2	6.0	7.6	7.4	16.8	16.6	10.10	-
SS (mg/L)	9.0	8.0	7.0	8.0	8.0	9.0	8.17	-
Remarks				No dred	ging works	was observe	d.	

Station			IM	02			Co-ordinate	s		
Time (hh:mm)			18:16	-18:19			Northing	Easting		
Water Depth (m)			15	5.0			22.21.624	113.55.917		
Monitoring Depth (m)	1	.0	7	.5	14	1.0				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	27.7	27.6	26.8	26.9	26.3	26.2	26.91	-		
Salinity (ppt)	24.5	24.6	26.9	26.7	29.1	29.1	26.81	-		
pH	7.9	7.9	7.6	7.6	7.5	7.5	7.67			
D.O. Saturation (%)	84.1	82.7	52.5	53.7	60.5	58.9	65.40	-		
D.O. (mg/L)	5.8	5.7	3.6	3.7	4.1	4.0	4.49	4.09		
Turbidity (NTU)	4.4	4.5	3.5	3.3	3.9	3.8	3.90	-		
SS (mg/L)	6.0	7.0	6.0	7.0	6.0	5.0	6.17	-		
Remarks		No dredging works was observed.								

Station			MF	PB1						
Time (hh:mm)			17:40	-17:42						
Water Depth (m)			8							
Monitoring Depth (m)	1	.0	4							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.9	29.0	28.0	28.0	27.4	27.3	28.09	-		
Salinity (ppt)	11.9	11.9	19.6	19.6	23.5	23.3	18.31	-		
pH	7.5	7.6	7.6	7.5	7.5	7.5	7.54			
D.O. Saturation (%)	74.5	73.4	66.3	66.6	62.4	61.4	67.43	-		
D.O. (mg/L)	5.4	5.3	4.7	4.7	4.3	4.3	4.77	4.30		
Turbidity (NTU)	6.8	7.2	5.8	5.7	6.2	6.0	6.28	-		
SS (mg/L)	5.0	5.0	5.0	6.0	6.0	6.0	5.50	-		
Remarks		No dredging works was observed.								

Station			MF	PB2					
Time (hh:mm)			17:29	-17:31					
Water Depth (m)			9						
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)	29.9	30.0	28.6	28.5	26.5	26.5	28.33	-	
Salinity (ppt)	7.7	7.7	14.9	14.9	27.7	27.9	16.80	-	
pH	7.3	7.3	7.3	7.4	7.2	7.1	7.26		
D.O. Saturation (%)	74.7	75.3	68.5	67.1	54.6	53.6	65.63	-	
D.O. (mg/L)	5.4	5.5	4.9	4.8	3.8	3.7	4.66	3.72	
Turbidity (NTU)	7.6	7.9	6.8	6.6	13.3	12.9	9.18	-	
SS (mg/L)	7.0	6.0	7.0	7.0	7.0	7.0	6.83	-	
Remarks		No dredging works was observed.							

Station			N	IP.					
Time (hh:mm)			17:48	-17:50					
Water Depth (m)			5						
Monitoring Depth (m)	1	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)	29.4	29.4	-	-	27.0	27.0	28.22	-	
Salinity (ppt)	13.8	13.7	-	-	25.6	25.9	19.76	-	
pH	7.7	7.7	-	-	7.4	7.4	7.55		
D.O. Saturation (%)	79.3	80.5	-	-	67.7	68.6	74.03	-	
D.O. (mg/L)	5.6	5.7	-	-	4.7	4.7	5.18	4.70	
Turbidity (NTU)	6.6	6.5	-	-	8.4	8.5	7.50	-	
SS (mg/L)	7.0	6.0	-	-	6.0	7.0	6.50	-	
Remarks		No dredging works was observed.							

Compliance with Action an	u Lillill Lev	CI												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IM	01	IMO2	IMO2		MPB1	MF	MPB2 MP		/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.9	4.9	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.2	5.2	Y	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	9.8	9.8	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	9.0	9.0	N	N	N	N	N	N	N	N	N	N

Sampling Date	12/09/2008
Weather & Ambient Temperature	Fine, 31C

Station			C2 (	NM5)			1	
Time (hh:mm)				-11:43			1	
Water Depth (m)				9.8				
Monitoring Depth (m)	1	.0	3.8	1				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	27.7	28.0	26.4	26.5	25.0	25.0	26.42	-
Salinity (ppt)	25.1	24.6	28.5	28.4	31.9	31.9	28.41	-
pH	7.9	8.0	7.9	7.9	8.0	7.9	7.92	
D.O. Saturation (%)	72.1	71.5	52.3	51.7	47.7	47.6	57.15	-
D.O. (mg/L)	4.9	4.9	3.6	3.5	3.3	3.3	3.92	3.29
Turbidity (NTU)	3.3	3.6	3.5	3.9	8.9	8.9	5.35	-
SS (mg/L)	5.0	6.0	5.0	5.0	12.0	12.0	7.50	-
Remarks			No	dredging wo	orks was obs	erved.		

Station			IM	01			Co-ore	dinates
Time (hh:mm)			10:38	-10:42			Northing	Easting
Water Depth (m)			18	3.8			22.22.065	113.55.216
Monitoring Depth (m)	1	.0	9	.4	17	7.8		•
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	27.9	28.1	26.6	26.6	25.3	25.3	26.64	-
Salinity (ppt)	24.1	23.8	27.6	27.9	31.2	31.3	27.65	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.88	
D.O. Saturation (%)	68.3	70.8	47.6	49.0	41.9	44.7	53.72	-
D.O. (mg/L)	4.7	4.8	3.3	3.4	2.9	3.08	3.69	2.99
Turbidity (NTU)	5.3	5.1	7.3	7.5	13.9	13.9	8.83	-
SS (mg/L)	7.0	6.0	10.0	11.0	18.0	18.0	11.67	-
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	02			Co-ord	dinates
Time (hh:mm)				Northing	Easting			
Water Depth (m)			13	3.2			22.21.651	113.55.904
Monitoring Depth (m)	1	1.0 6.6 12.2						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.3	28.4	27.1	27.2	25.6	25.6	27.04	-
Salinity (ppt)	23.5	23.5	26.9	26.6	31.0	31.0	27.10	-
pH	8.0	7.9	7.9	7.9	7.8	7.9	7.91	
D.O. Saturation (%)	77.1	75.2	57.8	57.6	49.0	49.0	60.95	-
D.O. (mg/L)	5.3	5.1	4.0	3.9	3.4	3.4	4.2	3.36
Turbidity (NTU)	4.7	4.5	6.3	6.1	7.5	8.1	6.20	-
SS (mg/L)	7.0 6.0 7.0 7.0 11.0 10.0 8.							-
Remarks		-	No	dredging wo	orks was obs	erved.	-	

Station			MF	PB1			1	
Time (hh:mm)			11:10	-11:12				
Water Depth (m)			9	.0				
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)	28.9	29.1	26.9	27.0	26.9	26.7	27.59	-
Salinity (ppt)	17.4	17.1	26.7	26.3	26.8	27.4	23.62	-
pH	8.0	8.0	7.8	7.8	7.8	7.8	7.84	
D.O. Saturation (%)	74.4	79.8	52.4	52.7	58.1	56.2	62.27	-
D.O. (mg/L)	5.2	5.6	3.6	3.6	4.0	3.9	4.31	3.93
Turbidity (NTU)	3.5	3.4	5.0	4.9	5.6	5.5	4.65	-
SS (mg/L)	4.0	5.0	6.0	6.0	6.0	7.0	5.67	-
Remarks			No	dredging wo	orks was obs	erved.		·

Station			MI	PB2				
Time (hh:mm)								
Water Depth (m)			g	0.6				
Monitoring Depth (m)	1	.0	4	.8	8	.6		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.3	29.1	28.3	28.5	27.2	27.5	28.31	-
Salinity (ppt)	17.0	17.3	19.8	18.9	26.4	21.6	20.17	-
pH	8.0	8.0	7.9	8.0	7.8	7.8	7.90	
D.O. Saturation (%)	92.5	91.9	67.0	62.8	60.2	55.4	71.63	-
D.O. (mg/L)	6.5	6.4	4.7	4.4	4.1	3.9	4.99	4.01
Turbidity (NTU)	4.8	4.9	9.9	9.5	15.9	16.3	10.22	-
SS (mg/L)	5.0	5.0	6.0	5.0	6.0	5.0	5.33	-
Remarks	No dredging works was observed.							

Station			N	IP			1					
Time (hh:mm)			11:19	-11:20								
Water Depth (m)		5.8										
Monitoring Depth (m)	1	.0										
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom				
Water Temperature (°C)	28.2	28.0	-	-	27.0	27.0	27.53	-				
Salinity (ppt)	21.5	21.5 22.3 26.7 26.7										
pH	7.8	7.8 7.8 7.6 7.6 7.69										
D.O. Saturation (%)	71.2	71.2 68.7 56.9 48.8 61.40 -										
D.O. (mg/L)	4.9	4.9 4.8 3.9 3.4 4.24 3.63										
Turbidity (NTU)	5.9	6.2	-	-	10.6	10.7	8.35	-				
SS (mg/L)	6.0	7.0	-	-	7.0	9.0	7.25	-				
Remarks		No dredging works was observed.										

Compliance with Action an	ia Limit Lev	<u>ei</u>												
Parameter	As in	EM&A	C2*1	30%	IM	101	IM	02		MPB1	MF	PB2	IV	IP .
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.3	3.3	Y	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	3.9	3.9	Υ	Υ	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	7.0	7.0	N	N	N	N	N	N	Ν	N	Ν	N
SS (Depth-averaged)	24.0	37.0	9.8	9.8	N	N	N	N	N	N	Ν	N	Ν	N

Sampling Date	12/09/2008
Weather & Ambient Temperature	Fine, 30C

Station			C1 (	NM3)						
Time (hh:mm)			18:41	-18:44						
Water Depth (m)										
Monitoring Depth (m)	1	.0	8							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.0	28.0	26.7	26.2	25.0	25.0	26.46	-		
Salinity (ppt)	24.7	24.6	27.9	29.3	31.9	31.9	28.38	-		
pH	7.9	7.9	7.9	7.86						
D.O. Saturation (%)	71.9	71.2	52.4	50.6	48.8	47.2	57.02	-		
D.O. (mg/L)	4.9	4.9	3.91	3.32						
Turbidity (NTU)	3.6	3.8	4.7	4.6	8.3	8.0	5.50	-		
SS (mg/L)	5.0	5.0	6.0	6.0	12.0	11.0	7.50	-		
Remarks		No dredging works was observed.								

Station			C3 (	NM6)						
Time (hh:mm)			17:24	-17:25						
Water Depth (m)			6							
Monitoring Depth (m)	1	.0	3							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	29.1	29.1	28.5	28.4	26.9	28.0	28.31	-		
Salinity (ppt)	18.3	18.6	20.6	20.9	28.0	24.5	21.80	-		
pH	8.0	8.0	8.0	7.89						
D.O. Saturation (%)	95.3	96.4	74.6	79.00	-					
D.O. (mg/L)	6.6	6.7	5.2	5.45	4.55					
Turbidity (NTU)	3.3	3.5	4.7	5.28	-					
SS (mg/L)	5.0	4.0	4.0	4.0	3.0	4.0	4.00	-		
Remarks		No dredging works was observed.								

Station			IM	01			Co-ordinate	s		
Time (hh:mm)			18:17	-18:21			Northing	Easting		
Water Depth (m)			18	3.2			22.22.067	113.55.217		
Monitoring Depth (m)	1	.0	9	.1	17	7.2				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.0	28.1	26.7	26.8	25.3	25.3	26.68	-		
Salinity (ppt)	24.0	23.8	28.0	27.5	31.2	31.2	27.63	-		
pH	7.8	7.9	7.8	7.81						
D.O. Saturation (%)	70.3	70.7	50.0	48.1	55.85	-				
D.O. (mg/L)	4.8	4.8	3.4	3.83	3.23					
Turbidity (NTU)	5.0	5.0	7.0	7.2	12.2	12.4	8.13	-		
SS (mg/L)	6.0	6.0	12.0	10.0	21.0	18.0	12.17	-		
Remarks		No dredging works was observed.								

Station			IM	02			Co-ordinate	S	
Time (hh:mm)			18:28	-18:31			Northing	Easting	
Water Depth (m)			1;	3.9		22.21.648	113.55.906		
Monitoring Depth (m)	1	.0	6	.9	12	2.9			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	28.4	28.4	27.0	27.2	25.6	25.6	27.03	-	
Salinity (ppt)	23.5	23.5	27.2	26.6	31.0	31.0	27.12	-	
pH	7.9	7.9	7.9	7.90					
D.O. Saturation (%)	75.7	77.4	54.0	59.23	-				
D.O. (mg/L)	5.2	5.3	3.7	4.1	3.2				
Turbidity (NTU)	4.8	4.7	6.4	6.0	8.0	8.3	6.37	-	
SS (mg/L)	6.0	6.0	8.0	7.0	11.0	9.0	7.83	-	
Remarks		No dredging works was observed.							

Station			MF	PB1								
Time (hh:mm)			17:50	-17:53								
Water Depth (m)			8									
Monitoring Depth (m)	1	.0	4	.2								
Trial	Trial 1	Trial 2	Depth-averaged	Bottom								
Water Temperature (°C)	28.8	28.8	26.8	27.0	26.5	26.6	27.42	-				
Salinity (ppt)	17.5	17.8	26.8	27.0	28.1	27.9	24.19	-				
pH	8.0	8.0 8.0 7.8 7.8 7.8 7.8 7.83										
D.O. Saturation (%)	74.8	4.8 77.6 52.0 50.1 54.2 56.4 60.85 -										
D.O. (mg/L)	5.2	5.2 5.4 3.6 3.4 3.7 3.9 4.21 3.80										
Turbidity (NTU)	3.9	3.9 3.8 6.0 5.6 7.3 7.2 5.63 -										
SS (mg/L)	4.0	3.0	6.0	5.0	4.0	4.0	4.33	-				
Remarks		No dredging works was observed.										

Station			M	PB2								
Time (hh:mm)			17:41	-17:43								
Water Depth (m)			g									
Monitoring Depth (m)	1	.0	4	.2								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	29.1	29.2	28.6	28.3	27.0	27.0	28.19	-				
Salinity (ppt)	17.2	17.0	18.8	20.9	26.5	27.0	21.24	-				
pH	8.0	.0 8.0 8.0 7.9 7.8 7.8 7.91										
D.O. Saturation (%)	85.6	i.6 87.2 69.2 68.0 58.4 57.7 71.02										
D.O. (mg/L)	6.0	6.0 6.1 4.8 4.7 4.0 4.0 4.93 3.										
Turbidity (NTU)	4.5	4.6	9.8	9.4	20.9	20.4	11.60	-				
SS (mg/L)	4.0	5.0	5.0	4.0	6.0	5.0	4.83	-				
Remarks		No dredging works was observed.										

Station			IV	IP							
Time (hh:mm)			18:00	-18:01							
Water Depth (m)			5								
Monitoring Depth (m)	1	.0	2	.6							
Trial	Trial 1	Trial 2	Depth-averaged	Bottom							
Water Temperature (°C)	28.1	28.0	-	-	26.9	26.9	27.47	-			
Salinity (ppt)	21.7	22.4	-	-	26.8	27.0	24.47	-			
pH	7.8	8 7.8 7.7 7.7 7.74									
D.O. Saturation (%)	66.7	7 66.1 54.0 50.6 59.35 -									
D.O. (mg/L)	4.6	4.6 4.6 3.7 3.5 4.09 3.59									
Turbidity (NTU)	6.6	6.6 6.8 12.0 12.1 9.38 -									
SS (mg/L)	4.0	5.0	-	-	12.0	10.0	7.75	-			
Remarks		No dredging works was observed.									

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IIV	IO1	IMO2			MPB1		MPB2		/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.9	3.9	Υ	N	Υ	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.7	4.7	Υ	Υ	Υ	N	N	N	Z	N	Υ	N
Turbidity (Depth-averaged)	29.0	49.0	7.0	7.0	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	7.5	7.5	N	N	N	N	N	N	N	N	N	N

Sampling Date	9/16/2008
Weather & Ambient Temperature	Sunny, 32C

Station			C2 (	NM5)			1				
Time (hh:mm)			13:48	-13:51							
Water Depth (m)											
Monitoring Depth (m)	1	.0	9	.7	18	3.4					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	28.7	29.0	27.4	27.5	26.0	26.0	27.45	-			
Salinity (ppt)	26.6	26.1	30.0	29.9	33.4	33.5	29.92	-			
pH	8.0	8.0	8.0	8.0	8.0	8.0	8.00				
D.O. Saturation (%)	85.3	84.7	65.5	64.9	60.8	60.9	70.35	-			
D.O. (mg/L)	5.6	5.5	4.2	4.2	3.9	3.9	4.56	3.93			
Turbidity (NTU)	4.1	4.4	6.15	-							
SS (mg/L)	9.0	9.0 8.0 8.0 9.0 8.0 10.0									
Remarks			No	dredging wo	orks was obs	erved.					

1-								
Station			IM	01			Co-ore	dinates
Time (hh:mm)			12:48	-12:49			Northing	Easting
Water Depth (m)				22.22.068	113.55.298			
Monitoring Depth (m)	1	.0	8	.9	16	6.8		3
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.0	29.1	27.7	27.6	26.3	26.3	27.67	-
Salinity (ppt)	25.6	25.3	29.1	29.4	32.7	32.8	29.16	-
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.96	
D.O. Saturation (%)	81.5	84.0	60.8	62.2	55.1	57.9	66.92	-
D.O. (mg/L)	5.3	5.5	3.9	4.0	3.5	3.72	4.33	3.63
Turbidity (NTU)	6.1	5.9	8.1	8.3	10.7	10.7	8.30	-
SS (mg/L)	9.0	8.0	8.17	-				
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	02			Co-ord	dinates
Time (hh:mm)			12:36	-12:39			Northing	Easting
Water Depth (m)				22.21.691	113.55.875			
Monitoring Depth (m)	1	.0	6	.5	11	1.9		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.4	29.4	28.1	28.3	26.7	26.6	28.07	-
Salinity (ppt)	25.1	25.0	28.4	28.1	32.5	32.6	28.61	-
pH	8.1	8.0	8.0	8.0	7.9	8.0	7.99	
D.O. Saturation (%)	90.3	88.4	71.0	70.8	62.2	62.2	74.15	-
D.O. (mg/L)	5.9	5.8	4.6	4.6	4.0	4.00	4.81	4.00
Turbidity (NTU)	5.5	5.3	7.1	6.9	8.3	8.9	7.00	-
SS (mg/L)	10.0	10.0	8.0	9.33	-			
Remarks			No	dredging wo	orks was obs	erved.	•	

Station			MF	PB1							
Time (hh:mm)			13:18	-13:19							
Water Depth (m)											
Monitoring Depth (m)	1	.0	4	.1	7	.2					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom			
Water Temperature (°C)	30.0	30.2	27.9	28.0	27.7	27.9	28.62	-			
Salinity (ppt)	18.9	18.7	28.2	27.9	28.9	28.3	25.13	-			
pH	8.1	8.1	7.8	7.8	7.9	7.9	7.92				
D.O. Saturation (%)	87.6	93.0	65.6	65.9	69.4	71.3	75.47	-			
D.O. (mg/L)	5.8	6.2	4.2	4.3	4.5	4.6	4.95	4.57			
Turbidity (NTU)	4.3	4.2	5.45	-							
SS (mg/L)	9.0	8.0	8.0	8.33	-						
Remarks		No dredging works was observed.									

Station			M	PB2					
Time (hh:mm)			13:08	-13:10					
Water Depth (m)									
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)	30.3	30.1	29.3	29.6	28.6	28.2	29.34	-	
Salinity (ppt)	18.5	18.8	21.4	20.4	23.1	27.9	21.68	_	
pH	8.1	8.1	8.0	8.0	7.9	7.8	7.98		
D.O. Saturation (%)	105.7	105.1	80.2	76.0	68.6	73.4	84.83	-	
D.O. (mg/L)	7.1	7.1	5.3	5.0	4.5	4.8	5.63	4.65	
Turbidity (NTU)	5.6	5.7	10.7	10.3	12.1	12.7	9.52	-	
SS (mg/L)	8.0	8.0	9.0	10.0	8.0	7.0	8.33	-	
Remarks	No dredging works was observed.								

Station			N	/IP							
Time (hh:mm)											
Water Depth (m)			5	5.5							
Monitoring Depth (m)	1	.0	2	2.7	4	.5					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom			
Water Temperature (°C)	29.2	29.0	-	-	28.0	28.0	28.56	-			
Salinity (ppt)	23.0	23.8	-	-	28.2	28.2	25.80	-			
pH	7.9	7.9	-	-	7.7	7.6	7.77				
D.O. Saturation (%)	84.4	81.9	-	-	70.1	62.0	74.60	-			
D.O. (mg/L)	5.6	5.4	-	-	4.6	4.0	4.88	4.27			
Turbidity (NTU)	6.7	7.0	-	-	11.4	11.5	9.15	-			
SS (mg/L)	11.0	9.0	7.0	8.25	-						
Remarks		No dredging works was observed.									

Compliance with Action at	Compliance with Action and Limit Level													
Parameter	As in	EM&A	C2*1	30%	IMO1		IM	IMO2		MPB1	MF	B2	MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedanc Exceedance of Limit Level E		Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	3.9	3.9	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.6	4.6	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	8.0	8.0	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	11.3	11.3	N	N	N	N	N	N	N	Ν	N	N

Sampling Date	9/16/2008
Weather & Ambient Temperature	Fine, 29C

Station			C1 (	NM3)							
Time (hh:mm)			19:58								
Water Depth (m)			16								
Monitoring Depth (m)	1	.0	8								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	29.0	29.0	27.8	27.2	26.0	26.0	27.49	-			
Salinity (ppt)	26.2	26.1	29.5	30.8	33.4	33.4	29.89	-			
pH	7.9	8.0	8.0	8.0	8.0	7.7	7.94				
D.O. Saturation (%)	85.1	84.4	65.6	63.8	60.4	62.0	70.22	-			
D.O. (mg/L)	5.6	5.5	4.2	4.1	3.9	4.0	4.55	3.96			
Turbidity (NTU)	4.4	4.6	5.5	5.4	8.8	9.1	6.30	-			
SS (mg/L)	8.0	8.0	8.0	10.0	8.17	-					
Remarks		No dredging works was observed.									

Station			C3 (	NM6)							
Time (hh:mm)			18:41	-18:42							
Water Depth (m)			7								
Monitoring Depth (m)	1	.0	3								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	30.1	30.1	29.6	29.4	27.9	29.0	29.34	-			
Salinity (ppt)	19.8	20.1	22.1	22.4	29.5	26.0	23.31	-			
pH	8.1	8.1	8.0	8.0	7.8	7.9	7.97				
D.O. Saturation (%)	108.5	109.6	87.8	87.9	76.8	82.6	92.20	-			
D.O. (mg/L)	7.3	7.3	5.8	5.8	5.0	5.4	6.09	5.19			
Turbidity (NTU)	4.1	4.3	5.5	5.7	8.6	8.3	6.08	-			
SS (mg/L)	8.0	9.0	8.0	7.0	8.50	-					
Remarks		No dredging works was observed.									

Station			IM	01			Co-ordinate	S			
Time (hh:mm)			19:34	-19:38			Northing	Easting			
Water Depth (m)			17	7.2		22.22.061	113.55.296				
Monitoring Depth (m)	1	.0	8								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	29.0	29.1	27.7	27.9	26.3	26.3	27.71	-			
Salinity (ppt)	25.5	25.3	29.5	29.0	32.8	32.8	29.14	-			
pH	7.9	7.9	7.9	7.9	7.8	7.9	7.89				
D.O. Saturation (%)	83.5	83.9	63.2	63.6	61.3	58.8	69.05	-			
D.O. (mg/L)	5.5	5.5	4.1	4.1	4.0	3.8	4.47	3.87			
Turbidity (NTU)	5.8	5.8	7.8	8.0	13.2	13.0	8.93	-			
SS (mg/L)	10.0	9.0	8.0	9.0	9.00	-					
Remarks		No dredging works was observed.									

Station			IM	02			Co-ordinate	s		
Time (hh:mm)			19:45	-19:48			Northing	Easting		
Water Depth (m)			11		22.21.648	113.55.871				
Monitoring Depth (m)	1	.0	5							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	29.5	29.5	28.0	28.2	26.6	26.7	28.06	-		
Salinity (ppt)	25.0	25.0	28.7	28.1	32.5	32.5	28.63	-		
pH	8.0	8.0	8.0	8.0	8.0	8.0	7.98			
D.O. Saturation (%)	88.9	90.6	67.2	68.1	60.6	59.2	72.43	-		
D.O. (mg/L)	5.8	5.9	4.3	4.4	3.9	3.8	4.69	3.85		
Turbidity (NTU)	5.6	5.5	7.2	6.8	9.1	8.8	7.17	-		
SS (mg/L)	10.0	9.0	8.0	8.0	8.50	-				
Remarks		No dredging works was observed.								

Station			MF	PB1						
Time (hh:mm)			19:07	-19:09						
Water Depth (m)			8							
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)	29.9	29.8	27.9	28.0	27.6	27.6	28.45	-		
Salinity (ppt)	19.0	19.3	28.3	28.5	29.6	29.5	25.70	-		
pH	8.1	8.0	7.8	7.9	7.8	7.8	7.91			
D.O. Saturation (%)	88.0	90.8	65.2	63.3	67.4	69.6	74.05	-		
D.O. (mg/L)	5.9	6.1	4.2	4.1	4.4	4.5	4.85	4.44		
Turbidity (NTU)	4.7	4.6	6.8	6.4	8.1	8.0	6.43	-		
SS (mg/L)	9.0	10.0	9.0	11.0	9.0	10.0	9.67	-		
Remarks		No dredging works was observed.								

Station			MF	PB2				
Time (hh:mm)			18:58	-18:59				
Water Depth (m)			9					
Monitoring Depth (m)	1	.0	4					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	30.1	30.3	29.6	29.3	28.0	28.0	29.22	-
Salinity (ppt)	18.8	18.5	20.3	22.4	28.0	28.5	22.75	-
pH	8.1	8.1	8.1	8.0	7.9	7.9	7.99	
D.O. Saturation (%)	98.8	100.4	82.4	81.2	71.6	70.9	84.22	-
D.O. (mg/L)	6.6	6.7	5.5	5.4	4.7	4.6	5.57	4.63
Turbidity (NTU)	5.3	5.4	10.6	10.2	14.2	14.1	9.97	-
SS (mg/L)	8.0	8.0	9.0	9.0	9.0	10.0	8.83	-
Remarks				No dredgi	ng works wa	is observed.		

Station			IV	IP				
Time (hh:mm)			19:16	-19:18				
Water Depth (m)			5	.9				
Monitoring Depth (m)	1	.0	3	.0	4	.9		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	29.2	29.0	-	-	27.9	27.9	28.50	-
Salinity (ppt)	23.2	23.9	-	-	28.5	28.3	25.98	-
pH	7.9	7.9	-	-	7.7	7.8	7.82	
D.O. Saturation (%)	79.9	79.3	-	-	63.8	67.2	72.55	-
D.O. (mg/L)	5.3	5.2	-	-	4.1	4.4	4.73	4.23
Turbidity (NTU)	7.4	7.6	-	-	12.9	12.8	10.18	-
SS (mg/L)	9.0	9.0	-	-	10.0	9.0	9.25	-
Remarks				No dredgi	ng works wa	s observed.		

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	% IMO1		IMO2			MPB1	MPB2		IV	/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.6	4.6	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.3	5.3	N	N	N	N	N	N	Z	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	8.0	8.0	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	10.8	10.8	N	Ν	N	N	N	N	N	N	N	N

Sampling Date	09/17/08
Weather & Ambient Temperature	Fine, 31C

Station	I		C2 (	NM5)			1	
••••			<u> </u>					
Time (hh:mm)			15:05	-15:08				
Water Depth (m)								
Monitoring Depth (m)	1	.0	3.8					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.4	28.6	27.6	27.7	27.2	27.2	27.77	-
Salinity (ppt)	28.5	28.5	29.1	29.1	29.8	29.8	29.12	-
pH	7.6	7.5	7.5	7.5	7.3	7.2	7.42	
D.O. Saturation (%)	84.1	82.5	70.4	68.7	69.8	71.1	74.43	-
D.O. (mg/L)	5.6	5.5	4.7	4.6	4.7	4.8	4.98	4.74
Turbidity (NTU)	4.6	4.4	8.2	7.9	16.2	16.7	9.67	-
SS (mg/L)	6.0	8.0	7.0	6.0	6.0	6.0	6.50	1
Remarks			No	dredging wo	orks was obs	erved.		

Station			IM	01			Co-ord	dinates
Time (hh:mm)			13:57	7-14:0			Northing	Easting
Water Depth (m)				22.21.891	113.55.214			
Monitoring Depth (m)	1	.0	9	.4	17	7.8		-
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.2	30.2	28.5	28.4	27.6	27.7	28.58	-
Salinity (ppt)	26.8	26.8	27.9	27.7	29.4	29.3	27.99	-
pH	7.4	7.3	7.5	7.5	7.5	7.5	7.44	
D.O. Saturation (%)	76.2	79.3	73.9	73.1	69.8	70.2	73.75	-
D.O. (mg/L)	5.1	5.2	4.9	4.9	4.7	4.70	4.91	4.69
Turbidity (NTU)	7.4	7.7	8.9	8.8	12.8	13.1	9.78	-
SS (mg/L)	14.0	14.0	10.0	11.0	10.0	10.0	11.50	-
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	02			Co-ord	dinates
Time (hh:mm)			13:47	-13:49			Northing	Easting
Water Depth (m)				22.21.648	113.55.897			
Monitoring Depth (m)	1	.0	8	.0	15	5.0		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.5	28.4	28.3	28.3	27.4	27.4	28.03	-
Salinity (ppt)	27.3	27.3	28.0	27.8	29.5	29.5	28.24	-
pH	7.5	7.4	7.5	7.5	7.5	7.6	7.50	
D.O. Saturation (%)	75.0	74.1	72.7	72.9	69.3	69.7	72.28	-
D.O. (mg/L)	5.0	5.0	4.9	4.9	4.7	4.68	4.84	4.67
Turbidity (NTU)	6.9	6.8	8.6	8.3	14.5	14.2	9.88	-
SS (mg/L)	9.0	10.17	-					
Remarks			No	dredging wo	orks was obs	erved.	•	

Station			MF	PB1			1	
Time (hh:mm)			14:26	-14:28				
Water Depth (m)								
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.1	28.1	28.0	28.0	27.9	28.0	28.01	-
Salinity (ppt)	27.8	28.5	29.0	28.7	29.4	29.0	28.76	-
pH	7.4	7.4	7.4	7.4	7.4	7.4	7.38	
D.O. Saturation (%)	81.6	82.2	72.2	71.3	74.4	73.0	75.78	-
D.O. (mg/L)	5.5	5.5	4.8	4.8	5.0	4.9	5.07	4.93
Turbidity (NTU)	18.5	19.8	25.3	25.3	25.2	25.7	23.30	-
SS (mg/L)	10.0	9.0	23.50	-				
Remarks			No	dredging wo	orks was obs	served.		•

Station			MI	PB2							
Time (hh:mm)			14:14	-14:16							
Water Depth (m)											
Monitoring Depth (m)	1	.0	4	.6	8	.2					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	29.2	29.3	28.5	28.3	28.1	28.0	28.56	-			
Salinity (ppt)	27.3	27.2	28.3	28.6	28.8	28.9	28.17	-			
pH	7.4	7.4	7.4	7.4	7.4	7.4	7.39				
D.O. Saturation (%)	77.2	77.0	72.0	70.5	74.9	72.7	74.05	-			
D.O. (mg/L)	5.1	5.1	4.8	4.7	5.0	4.9	4.92	4.93			
Turbidity (NTU)	8.2	7.5	12.5	12.8	15.5	14.9	11.90	-			
SS (mg/L)	8.0	9.0	8.0	9.0	10.0	8.0	8.67	-			
Remarks	No dredging works was observed.										

Station			I.	/IP	•			
Time (hh:mm)			14:39	)-14:40				
Water Depth (m)								
Monitoring Depth (m)	1	.0	2	2.8	4	.5		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.5	28.8	-	-	28.4	28.3	28.48	-
Salinity (ppt)	27.2	27.0	-	-	28.1	28.3	27.62	-
pH	7.3	7.3	-	-	7.3	7.4	7.31	
D.O. Saturation (%)	75.8	74.5	-	-	78.1	77.3	76.43	-
D.O. (mg/L)	5.1	5.0	-	-	5.2	5.2	5.10	5.19
Turbidity (NTU)	14.0	13.6	-	-	18.3	18.5	16.10	-
SS (mg/L)	11.0	12.0	-	-	17.0	16.0	14.00	-
Remarks		•	No	dredging wo	orks was obs	served.	•	

Compliance with Action at	ia Limit Lev	<u>/ei</u>												
Parameter	As in	EM&A	C2*1	C2*130%		01	IMO2			MPB1	MPB2		IV	IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.7	4.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.0	5.0	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	12.6	12.6	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	8.5	8.5	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/17/08
Weather & Ambient Temperature	Fine, 29C

Station			C1 (									
Time (hh:mm)			20:28									
Water Depth (m)			16									
Monitoring Depth (m)	1	.0	8									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.2	28.4	27.4	27.5	27.0	27.0	27.57	-				
Salinity (ppt)	28.6	28.6	29.2	29.1	29.8	29.8	29.17	-				
pH	7.6	7.6	7.5	7.6	7.3	7.4	7.51					
D.O. Saturation (%)	81.5	81.3	67.1	66.8	68.3	68.4	72.23	-				
D.O. (mg/L)	5.4	5.4	4.5	4.5	4.6	4.6	4.83	4.60				
Turbidity (NTU)	4.5	4.1	6.9	7.0	12.8	13.0	8.05	-				
SS (mg/L)	7.0	8.0	11.0	9.0	9.0	7.0	8.50	-				
Remarks		No dredging works was observed.										

Station			C3 (	NM6)				
Time (hh:mm)			19:07					
Water Depth (m)			7					
Monitoring Depth (m)	1	.0	3	.5	6	.0		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.7	28.5	27.5	27.6	27.5	27.5	27.86	-
Salinity (ppt)	26.9	27.1	30.3	29.8	30.4	30.4	29.15	-
pH	7.3	7.3	7.4	7.4	7.4	7.3	7.34	
D.O. Saturation (%)	79.0	78.7	72.0	72.6	72.2	71.7	74.37	-
D.O. (mg/L)	5.3	5.2	4.8	4.8	4.8	4.8	4.96	4.80
Turbidity (NTU)	4.8	4.7	8.1	8.3	15.2	15.1	9.37	-
SS (mg/L)	6.0	5.0	7.0	8.0	9.0	8.0	7.17	-
Remarks				No dred	dging works	was observed	d.	

Station			IM	01			Co-ordinate	s
Time (hh:mm)			20:02	-20:05		Northing	Easting	
Water Depth (m)			18		22.21.897	113.55.218		
Monitoring Depth (m)	1	.0	9					
Trial	Trial 1	Trial 2 Trial 1 Trial 2 Trial 1 Trial 2					Depth-averaged	Bottom
Water Temperature (°C)	28.7	28.3	28.3	28.3	27.4	27.4	28.08	-
Salinity (ppt)	27.1	27.1	28.1	28.0	29.3	29.4	28.16	-
pH	7.4	7.4	7.5	7.4	7.5	7.5	7.44	
D.O. Saturation (%)	79.0	80.2	73.2	72.1	70.2	70.1	74.13	-
D.O. (mg/L)	5.3	5.4	4.9	4.8	4.7	4.7	4.95	4.71
Turbidity (NTU)	9.5	9.9	9.8	9.6	11.4	11.9	10.35	-
SS (mg/L)	16.0	18.0	12.0	10.0	13.33	-		
Remarks				No dred	dging works	was observe	d.	

Station			IM	02			Co-ordinate:	s
Time (hh:mm)			20:15		Northing	Easting		
Water Depth (m)			15		22.21.646	113.55.899		
Monitoring Depth (m)	1	.0	7					
Trial	Trial 1	Trial 2	Trial 1	Depth-averaged	Bottom			
Water Temperature (°C)	28.2	28.3	28.2	28.2	27.2	27.2	27.87	-
Salinity (ppt)	27.4	27.3	27.3 27.8 27.8 29.5 29.5				28.21	-
pH	7.4	7.4	7.4	7.3	7.2	7.3	7.34	
D.O. Saturation (%)	76.8	73.5	72.2	72.2	69.1	68.7	72.08	-
D.O. (mg/L)	5.1	4.9	4.8	4.8	4.6	4.6	4.83	4.63
Turbidity (NTU)	7.1 6.9 8.4 8.6 18.3 18.1						11.23	-
SS (mg/L)	9.0	8.0	9.0	10.0	11.0	9.83	-	
Remarks				No dred	dging works	was observe	d.	

Station										
Time (hh:mm)			19:40							
Water Depth (m)			8	.0			8.0			
Monitoring Depth (m)	1	.0	4	.0	7	.0				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.2	28.1	27.9	27.8	27.7	27.8	27.92	-		
Salinity (ppt)	27.1	27.2	28.6	28.6	29.3	29.1	28.32	-		
pH	7.4	7.4	7.4	7.4	7.4	7.5	7.42			
D.O. Saturation (%)	80.5	78.2	69.9	69.7	70.4	71.1	73.30	-		
D.O. (mg/L)	5.4	5.2	4.7	4.7	4.7	4.7	4.90	4.72		
Turbidity (NTU)	8.2	8.6	19.5	19.2	20.4	20.9	16.13	-		
SS (mg/L)	9.0	10.0	20.0	24.0	34.0	36.0	22.17	-		
Remarks		No dredging works was observed.								

Station			MF	PB2								
Time (hh:mm)			19:28									
Water Depth (m)			8	3.6								
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)	29.0	28.8	28.3	28.1	28.0	28.0	28.37	-				
Salinity (ppt)	27.5	27.8	28.4	28.7	29.0	29.1	28.41	-				
pH	7.4	7.4	7.4	7.4	7.4	7.4	7.41					
D.O. Saturation (%)	78.6	78.0	74.7	72.5	74.1	73.7	75.27	-				
D.O. (mg/L)	5.2	5.2	5.0	4.8	4.9	4.9	5.00	4.92				
Turbidity (NTU)	6.8	6.6	10.7	10.3	15.3	15.8	10.92	-				
SS (mg/L)	11.0	11.0	10.0	9.0	10.0	9.0	10.00	-				
Remarks		No dredging works was observed.										

Station												
Time (hh:mm)			19:44									
Water Depth (m)			5	.3								
Monitoring Depth (m)	1.	.0	2	.7	4	.3						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.4	28.5	-	-	28.1	28.0	28.26	-				
Salinity (ppt)	27.0	27.0	-	-	28.2	28.3	27.66	-				
pH	7.3	7.3	-	-	7.3	7.3	7.30					
D.O. Saturation (%)	76.6	77.1	-	-	78.7	75.6	77.00	-				
D.O. (mg/L)	5.1	5.1	-	-	5.3	5.1	5.14	5.15				
Turbidity (NTU)	10.2	10.2	-	-	17.5	17.2	13.78	-				
SS (mg/L)	10.0	11.0	-	-	15.0	16.0	13.00	-				
Remarks		No dredging works was observed.										

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IM	101	IMO2		MPB1		MPB2		MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.7	4.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.9	4.9	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	11.3	11.3	N	N	N	N	N	N	Ν	N	N	N
SS (Depth-averaged)	24.0	37.0	10.2	10.2	N	Ν	N	N	N	N	N	N	N	N

Sampling Date	09/18/08
Weather & Ambient Temperature	Fine, 31C

Station				]								
Time (hh:mm)												
Water Depth (m)			19	9.2								
Monitoring Depth (m)	1	.0	9	.6	18	3.2						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom				
							averaged					
Water Temperature (°C)	28.2	28.2	28.1	28.0	27.5	27.5	27.91	-				
Salinity (ppt)	28.0	28.0	28.3	28.2	29.5	29.5	28.59	-				
pH	7.3	7.4	7.4	7.3	7.3	7.4	7.33					
D.O. Saturation (%)	71.2	72.6	71.6	69.3	68.2	70.7	70.60	-				
D.O. (mg/L)	4.8	4.9	4.8	4.6	4.6	4.7	4.72	4.65				
Turbidity (NTU)	7.5	7.8	9.7	9.6	28.5	28.8	15.32	-				
SS (mg/L)	11.0	11.0 9.0 12.0 13.0 23.0 21.0 14.83 -										
Remarks		•	No	dredging wo	orks was obs	erved.						

Station				Co-ore	dinates			
Time (hh:mm)				Northing	Easting			
Water Depth (m)			16	6.4			22.21.892	113.55.226
Monitoring Depth (m)	1	.0	8	3.2	15	5.4		-
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.5	28.5	28.3	28.3	28.0	27.9	28.25	-
Salinity (ppt)	26.2	26.3	27.5	27.5	28.5	28.6	27.41	-
pH	7.2	7.2	7.3	7.3	7.3	7.2	7.25	
D.O. Saturation (%)	71.2	71.8	71.3	72.0	71.7	72.5	71.75	-
D.O. (mg/L)	4.8	4.8	4.8	4.8	4.8	4.84	4.80	4.82
Turbidity (NTU)	8.7	8.6	8.3	8.7	8.6	9.1	8.67	-
SS (mg/L)	10.0	9.50	-					
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	O2			Co-ord	dinates
Time (hh:mm)			14:18	-14:20			Northing	Easting
Water Depth (m)				22.21.658	113.55.898			
Monitoring Depth (m)	1	.0	7	.6	14	1.2		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.2	28.2	28.1	28.2	27.9	27.9	28.08	-
Salinity (ppt)	27.9	27.9	28.1	28.0	28.6	28.6	28.18	-
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.32	
D.O. Saturation (%)	72.6	72.2	70.0	70.6	70.1	72.4	71.32	-
D.O. (mg/L)	4.9	4.8	4.7	4.7	4.7	4.84	4.77	4.77
Turbidity (NTU)	7.0 7.0 9.1 8.8 10.5 10.4							-
SS (mg/L)	7.0	8.0	15.0	10.50	-			
Remarks			No	dredging wo	orks was obs	erved.	•	

Station			MF	PB1				
Time (hh:mm)			14:53	-14:55				
Water Depth (m)			8	.4				
Monitoring Depth (m)	1	.0	4	.2	7	'.4		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.5	28.5	28.4	28.4	28.3	28.3	28.40	-
Salinity (ppt)	26.5	26.4	27.24	-				
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.29	
D.O. Saturation (%)	69.2	69.8	70.7	68.8	69.0	74.7	70.37	-
D.O. (mg/L)	4.6	4.7	4.7	4.6	4.6	5.0	4.71	4.79
Turbidity (NTU)	12.1	12.6	17.6	17.2	28.2	28.4	19.35	-
SS (mg/L)	14.0	13.0	19.0	17.0	33.0	33.0	21.50	-
Remarks			No	dredging wo	orks was obs	served.		

Station			MF	PB2						
Time (hh:mm)										
Water Depth (m)			9	.0						
Monitoring Depth (m)	1	.0	4	.5	8	.0				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	28.5	28.5	28.5	28.5	28.5	28.5	28.46	-		
Salinity (ppt)	26.6	26.6	26.7	26.6	26.9	26.8	26.70	-		
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.30			
D.O. Saturation (%)	76.5	76.4	69.0	68.0	71.0	68.8	71.62	-		
D.O. (mg/L)	5.1	5.1	4.6	4.6	4.8	4.6	4.80	4.68		
Turbidity (NTU)	14.0	13.0	19.5	19.2	22.4	22.2	18.38	-		
SS (mg/L)	18.0	17.0	28.0	26.0	29.0	28.0	24.33	-		
Remarks	No dredging works was observed.									

Station			N	IP			1				
Time (hh:mm)			15:02	-15:03							
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)	28.5	28.5	-	-	28.4	28.4	28.44	-			
Salinity (ppt)	27.1	27.1	-	-	27.4	27.5	27.29	-			
pH	7.3	7.3	-	-	7.3	7.3	7.29				
D.O. Saturation (%)	72.4	71.4	-	-	73.6	71.6	72.25	-			
D.O. (mg/L)	4.8	4.8	-	-	4.9	4.8	4.83	4.85			
Turbidity (NTU)	14.0	14.3	-	-	28.8	28.4	21.38	-			
SS (mg/L)	17.0	16.0	24.0	20.00	-						
Remarks		No dredging works was observed.									

Compliance with Action an	<u>10 Limit Lev</u>	<u>'eı</u>												
Parameter	As in	EM&A	C2*1	30%	6 IMO1		IM	02		MPB1	MPB2		MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.7	4.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.7	4.7	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	19.9	19.9	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	19.3	19.3	N	N	N	N	N	N	Υ	N	N	N

Sampling Date	09/18/08
Weather & Ambient Temperature	Fine, 30C

Station			C1 (	NM3)				
Time (hh:mm)			20:43	-20:45				
Water Depth (m)			16	6.2				
Monitoring Depth (m)	1	.0	8	3.1	15	5.2		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	28.1	28.1	27.9	27.9	27.5	27.4	27.81	-
Salinity (ppt)	27.0	27.9	28.1	28.3	29.3	29.4	28.32	-
pH	7.3	7.3	7.3	7.2	7.3	7.3	7.27	
D.O. Saturation (%)	71.1	71.2	69.4	69.2	69.5	68.5	69.82	-
D.O. (mg/L)	4.8	4.8	4.6	4.6	4.7	4.6	4.68	4.63
Turbidity (NTU)	7.8	8.3	9.3	9.4	22.5	22.1	13.23	-
SS (mg/L)	12.0	10.0	15.0	14.0	23.0	21.0	15.83	-
Remarks				was observed				

Station			C3 (	NM6)								
Time (hh:mm)			19:35									
Water Depth (m)			6	.6								
Monitoring Depth (m)	1	.0	3	.3	5	.6						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	28.5	28.3	28.2	28.2	28.1	28.1	28.21	-				
Salinity (ppt)	26.5	27.1	28.3	28.4	29.1	29.1	28.08	-				
pH	7.4	7.4	7.4	7.4	7.4	7.4	7.42					
D.O. Saturation (%)	75.9	74.9	72.7	73.4	72.7	73.5	73.85	-				
D.O. (mg/L)	5.1	5.0	4.8	4.9	4.8	4.9	4.92	4.86				
Turbidity (NTU)	6.5	6.8	8.5	8.9	12.2	12.4	9.22	-				
SS (mg/L)	9.0	7.0	13.0	12.0	13.0	12.0	11.00	-				
Remarks			No dredging works was observed.									

Station			IM	01			Co-ordinate	s			
Time (hh:mm)			20:18	-20:19			Northing	Easting			
Water Depth (m)			16		22.21.894	113.55.228					
Monitoring Depth (m)	1	.0	8								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.4	28.5	28.2	28.2	27.9	28.0	28.19	-			
Salinity (ppt)	25.8	26.1	27.4	27.3	28.4	28.1	27.18	-			
pH	7.2	7.2	7.3	7.3	7.3	7.3	7.26				
D.O. Saturation (%)	71.3	71.2	71.4	71.4	73.3	70.6	71.53	-			
D.O. (mg/L)	4.8	4.8	4.8	4.8	4.9	4.7	4.79	4.81			
Turbidity (NTU)	9.0	8.6	7.5	7.8	8.7	8.6	8.37	-			
SS (mg/L)	9.0	9.0	7.0	7.0	9.0	8.17	-				
Remarks		No dredging works was observed.									

Station			IM	02			Co-ordinate	es			
Time (hh:mm)			20:28	-20:30			Northing	Easting			
Water Depth (m)			14		22.21.656	113.55.900					
Monitoring Depth (m)	1	.0	7								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.1	28.1	28.0	28.0	27.8	27.8	27.96	-			
Salinity (ppt)	27.8	27.9	28.0	28.1	28.5	28.6	28.15	-			
pH	7.3	7.3	7.2	7.3	7.3	7.3	7.29				
D.O. Saturation (%)	73.7	73.2	71.7	72.4	74.9	73.2	73.18	-			
D.O. (mg/L)	4.9	4.9	4.8	4.8	5.0	4.9	4.89	4.96			
Turbidity (NTU)	7.0	6.5	8.1	7.5	10.6	10.9	8.43	-			
SS (mg/L)	8.0	9.0	9.0	11.0	9.50	-					
Remarks		No dredging works was observed.									

Station			MF	PB1						
Time (hh:mm)			19:55							
Water Depth (m)			8							
Monitoring Depth (m)	1	.0	4	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.4	28.4	28.3	28.3	28.2	28.2	28.30	-		
Salinity (ppt)	26.3	26.4	27.0	27.1	28.0	28.1	27.15	-		
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.28			
D.O. Saturation (%)	68.5	69.5	68.7	70.2	68.8	72.1	69.63	-		
D.O. (mg/L)	4.6	4.7	4.6	4.7	4.6	4.8	4.66	4.70		
Turbidity (NTU)	14.2	14.9	19.6	19.4	28.1	28.4	20.77	-		
SS (mg/L)	15.0	15.0	16.0	16.0	20.0	21.0	17.17	-		
Remarks		No dredging works was observed.								

Station			MF	PB2						
Time (hh:mm)			19:47							
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)	28.4	28.4	28.4	28.3	28.3	28.3	28.35	-		
Salinity (ppt)	26.5	26.6	26.54	-						
pH	7.3	7.3	7.3	7.3	7.3	7.3	7.30			
D.O. Saturation (%)	74.8	69.5	69.2	71.7	76.1	74.8	72.68	-		
D.O. (mg/L)	5.0	4.7	4.6	4.8	5.1	5.0	4.87	5.06		
Turbidity (NTU)	14.2	13.9	19.7	19.2	24.3	24.5	19.30	-		
SS (mg/L)	20.0	17.0	30.0	25.0	12.0	12.0	19.33	-		
Remarks		No dredging works was observed.								

Station			IV	IP							
Time (hh:mm)			20:05	-20:06							
Water Depth (m)			5								
Monitoring Depth (m)	1.	.0	2								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.4	28.4	-	-	28.3	28.3	28.34	-			
Salinity (ppt)	27.0 27.0 27.5 27.5						27.26	-			
pH	7.3	7.3	-	-	7.3	7.3	7.30				
D.O. Saturation (%)	74.1	72.9	-	-	74.4	72.1	73.38	-			
D.O. (mg/L)	5.0	4.9	-	-	5.0	4.8	4.90	4.90			
Turbidity (NTU)	14.8	15.1	-	28.1	21.70	-					
SS (mg/L)	16.0	14.0	31.50	-							
Remarks		No dredging works was observed.									

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IIV	101	IMO2			MPB1	MPB2		IV	/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.7	4.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.8	4.8	N	N	N	N	N	N	Z	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	14.6	14.6	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	17.4	17.4	N	Ν	N	N	N	N	N	N	Υ	N

Sampling Date	9/19/2008
Weather & Ambient Temperature	Cloudy, 33C

Station			C2 (	NM5)			1	
Time (hh:mm)			15:28	-15:31				
Water Depth (m)								
Monitoring Depth (m)	1	.0	9	.4	17	7.8		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	29.9	30.2	28.5	28.6	27.1	27.1	28.56	-
Salinity (ppt)	26.3	25.8	29.7	29.6	33.1	33.1	29.60	-
pH	8.1	8.2	8.2	8.1	8.1	8.2	8.14	
D.O. Saturation (%)	88.6	88.0	68.8	68.2	64.1	64.2	73.65	-
D.O. (mg/L)	5.7	5.7	4.4	4.3	4.1	4.1	4.72	4.09
Turbidity (NTU)	4.8	5.1	5.0	5.4	10.4	10.4	6.85	-
SS (mg/L)	4.0	4.0	4.50	-				
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	01			Co-ore	dinates
Time (hh:mm)			14:26	-14:30			Northing	Easting
Water Depth (m)			22.21.899	113.55.220				
Monitoring Depth (m)	1	.0	8	.7	16	6.3		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	30.1	30.2	28.8	28.7	27.5	27.4	28.78	-
Salinity (ppt)	25.3	25.0	28.8	29.0	32.4	32.5	28.84	-
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.10	
D.O. Saturation (%)	84.8	87.3	64.1	65.5	58.4	61.2	70.22	-
D.O. (mg/L)	5.5	5.6	4.1	4.2	3.7	3.88	4.49	3.79
Turbidity (NTU)	6.8	6.6	8.8	9.0	11.4	11.4	9.00	-
SS (mg/L)	7.0 6.0 4.0 5.0 5.0 6.0							-
Remarks			No	dredging wo	orks was obs	erved.		

Station				Co-ordinates						
Time (hh:mm)			14:16	-14:19			Northing	Easting		
Water Depth (m)				22.21.657	113.55.903					
Monitoring Depth (m)	1	.0	6	.2	11	.4				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	30.5	30.5	29.2	29.4	27.8	27.7	29.18	-		
Salinity (ppt)	24.7	24.7	28.1	27.7	32.2	32.2	28.29	-		
pH	8.2	8.2	8.2	8.1	8.1	8.1	8.13			
D.O. Saturation (%)	93.6	91.7	74.3	74.1	65.5	65.5	77.45	-		
D.O. (mg/L)	6.1	5.9	4.8	4.7	4.2	4.16	4.97	4.16		
Turbidity (NTU)	6.2	6.0	7.8	7.6	9.0	9.6	7.70	-		
SS (mg/L)	6.0 6.0 5.0 5.0 6.0 6.0							-		
Remarks		No dredging works was observed.								

Station			MF	PB1			1	
Time (hh:mm)			14:58	-15:00				
Water Depth (m)								
Monitoring Depth (m)	1	.0	4	.1	7	`.1		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	31.1	31.3	29.1	29.2	28.8	29.0	29.73	-
Salinity (ppt)	18.6	18.3	27.8	27.5	28.6	28.0	24.81	-
pH	8.2	8.2	8.0	8.0	8.0	8.0	8.06	
D.O. Saturation (%)	90.9	96.3	68.9	69.2	72.7	74.6	78.77	-
D.O. (mg/L)	6.0	6.4	4.4	4.4	4.7	4.8	5.11	4.73
Turbidity (NTU)	5.0	4.9	6.15	-				
SS (mg/L)	5.0	5.0	5.00	-				
Remarks			No	dredging wo	orks was obs	served.		

Station			M	PB2						
Time (hh:mm)			14:48	-14:50						
Water Depth (m)										
Monitoring Depth (m)	1	.0	4	.4	7	.8				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom		
							averaged			
Water Temperature (°C)	31.4	31.2	30.4	30.7	29.7	29.3	30.45	-		
Salinity (ppt)	18.2	18.5	21.0	20.1	22.8	27.5	21.36	-		
pH	8.2	8.2	8.1	8.2	8.0	8.0	8.12			
D.O. Saturation (%)	109.0	108.4	83.5	79.3	71.9	76.7	88.13	-		
D.O. (mg/L)	7.3	7.2	5.5	5.2	4.7	4.9	5.79	4.81		
Turbidity (NTU)	6.3	6.4	11.4	11.0	13.8	13.4	10.38	-		
SS (mg/L)	5.0	5.0	5.17	-						
Remarks		No dredging works was observed.								

Station			IV	IP			1			
Time (hh:mm)			15:07	-15:08						
Water Depth (m)										
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)	30.2	30.3	-	-	29.1	29.1	29.67	-		
Salinity (ppt)	23.5	22.7	-	-	27.8	27.9	25.48	-		
pH	8.0	8.0	-	-	7.8	7.9	7.91			
D.O. Saturation (%)	85.2	87.7	-	-	65.3	73.4	77.90	-		
D.O. (mg/L)	5.6	5.7	-	-	4.2	4.7	5.04	4.43		
Turbidity (NTU)	7.7	7.4	-	-	12.2	12.1	9.85	-		
SS (mg/L)	3.0	3.0	5.0	4.50	-					
Remarks		No dredging works was observed.								

Compliance with Action at	ia Lilliit Lev	<u>rei</u>												
Parameter	As in	EM&A	C2*1	C2*130%		2*130% IMO1 IMO2			MPB1	MPB2		MP		
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.1	4.1	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.7	4.7	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	8.9	8.9	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	5.9	5.9	N	N	N	N	N	N	N	N	N	N

Sampling Date	9/19/2008
Weather & Ambient Temperature	Rainy, 32C

Station			C1 (	NM3)								
Time (hh:mm)			10:21	-10:23								
Water Depth (m)			10	6.2								
Monitoring Depth (m)	1	.0	8									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	30.1	30.1	28.9	28.3	27.1	27.1	28.60	-				
Salinity (ppt)	25.9	25.8	29.1	30.4	33.1	33.1	29.57	-				
pH	8.1	8.1	8.1	8.1	8.2	7.9	8.08					
D.O. Saturation (%)	88.4	87.7	68.9	67.1	63.7	65.3	73.52	-				
D.O. (mg/L)	5.7	5.7	4.4	4.3	4.1	4.2	4.71	4.12				
Turbidity (NTU)	5.1	5.3	6.2	6.1	9.5	9.8	7.00	-				
SS (mg/L)	6.0	6.0	4.0	4.0	4.0	4.0	4.67	-				
Remarks		No dredging works was observed.										

Station			C3 (	NM6)				
Time (hh:mm)			9:03	-9:05				
Water Depth (m)			7					
Monitoring Depth (m)	1	.0	#VA					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	31.2	31.2	30.7	30.5	29.0	30.1	30.45	-
Salinity (ppt)	19.5	19.8	21.7	22.1	29.2	25.7	22.99	-
pH	8.2	8.2	8.2	8.2	7.9	8.0	8.11	
D.O. Saturation (%)	111.8	112.9	91.1	91.2	80.1	85.9	95.50	-
D.O. (mg/L)	7.4	7.5	6.0	6.0	5.2	5.5	6.25	5.35
Turbidity (NTU)	4.8	5.0	6.2	6.4	9.3	9.0	6.78	-
SS (mg/L)	4.0	2.0	3.0	2.0	2.83	-		
Remarks				No dred	dging works	was observe	d.	

Station			IM	01			Co-ordinate	s			
Time (hh:mm)			9:57-	10:01			Northing	Easting			
Water Depth (m)			17	7.0		22.21.897	113.55.219				
Monitoring Depth (m)	1	.0	8								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	30.2	30.1	28.8	29.0	27.4	27.4	28.82	-			
Salinity (ppt)	25.0	25.2	29.2	28.7	32.4	32.4	28.82	-			
pH	8.1	8.1	8.0	8.1	8.1	7.9	8.03				
D.O. Saturation (%)	87.2	86.8	66.5	66.9	62.1	64.6	72.35	-			
D.O. (mg/L)	5.6	5.6	4.2	4.3	3.9	4.1	4.63	4.03			
Turbidity (NTU)	6.5	6.5	8.5	8.7	13.7	13.9	9.63	-			
SS (mg/L)	6.0	4.0	4.0	4.0	4.17	-					
Remarks		No dredging works was observed.									

Station			IM	02			Co-ordinate	s		
Time (hh:mm)			10:08	-10:10			Northing	Easting		
Water Depth (m)			11		22.21.652	113.55.899				
Monitoring Depth (m)	1	.0	5	.7	10	0.4				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	30.6	30.6	29.1	29.3	27.7	27.8	29.17	-		
Salinity (ppt)	24.7	24.7	28.4	27.7	32.2	32.2	28.31	-		
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.12			
D.O. Saturation (%)	92.2	93.9	70.5	71.4	63.9	62.5	75.73	-		
D.O. (mg/L)	6.0	6.1	4.5	4.6	4.1	4.0	4.85	4.01		
Turbidity (NTU)	6.3	6.2	7.9	7.5	9.8	9.5	7.87	-		
SS (mg/L)	4.0 4.0 7.0 9.0 5.0 4.0						5.50	-		
Remarks		No dredging works was observed.								

Station			MF	PB1				
Time (hh:mm)			9:30	-9:32				
Water Depth (m)			8					
Monitoring Depth (m)	1	.0	4					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	30.9	31.0	29.0	29.1	28.7	28.7	29.56	-
Salinity (ppt)	19.0	18.7	28.0	28.2	29.2	29.1	25.38	-
pH	8.2	8.2	8.0	8.0	8.0	8.0	8.05	
D.O. Saturation (%)	94.1	91.3	68.5	66.6	70.7	72.9	77.35	-
D.O. (mg/L)	6.2	6.0	4.4	4.2	4.5	4.7	5.01	4.60
Turbidity (NTU)	5.3	5.4	7.5	7.1	8.8	8.7	7.13	-
SS (mg/L)	8.0	7.0	6.0	7.0	6.0	4.0	6.33	-
Remarks				No dredgi	ng works wa	s observed.		

Station			MF	B2							
Time (hh:mm)			9:20	-9:22							
Water Depth (m)			9								
Monitoring Depth (m)	1	.0	4	.6							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	31.2	31.4	30.7	30.4	29.2	29.1	30.33	-			
Salinity (ppt)	18.4	18.2	20.0	22.1	27.7	28.1	22.43	-			
pH	8.2	8.2	8.2	8.1	8.0	8.0	8.13				
D.O. Saturation (%)	102.1	103.7	85.7	84.5	74.9	74.2	87.52	-			
D.O. (mg/L)	6.8	6.9	5.6	5.5	4.8	4.8	5.73	4.79			
Turbidity (NTU)	6.0	6.1	11.3	10.9	14.9	14.8	10.67	-			
SS (mg/L)	4.0	4.0	4.0	2.0	4.0	4.0	3.67	-			
Remarks		No dredging works was observed.									

Station			IV	IP							
Time (hh:mm)			9:39	-9:40							
Water Depth (m)			5								
Monitoring Depth (m)	1.	.0	2	.8							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	30.3	30.1	-	-	29.0	29.0	29.61	-			
Salinity (ppt)	22.9	23.6	-	-	28.1	28.0	25.66	-			
pH	8.0	8.0	-	-	7.9	7.9	7.96				
D.O. Saturation (%)	83.2	82.6	-	-	67.1	70.5	75.85	-			
D.O. (mg/L)	5.4	5.4	-	-	4.3	4.5	4.89	4.39			
Turbidity (NTU)	8.1	8.3	-	-	13.6	13.5	10.88	-			
SS (mg/L)	6.0	4.0	-	4.0	5.00	-					
Remarks		No dredging works was observed.									

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IIV	101	IMO2			MPB1		PB2	IV.	/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.7	4.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.5	5.5	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	9.0	9.0	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	4.9	4.9	N	Ν	N	N	N	N	N	N	N	N

Sampling Date	09/22/08
Weather & Ambient Temperature	Cloudy, 30C

Station			C2 (I	NM5)			1	
Time (hh:mm)			7:02	-7:05			1	
Water Depth (m)			19	).4				
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	29.2	29.2	29.0	28.9	28.0	27.9	28.68	-
Salinity (ppt)	26.3	26.1	26.4	26.4	28.5	28.7	27.05	-
pH	7.0	7.0	7.0	7.0	6.9	6.9	6.97	
D.O. Saturation (%)	82.5	80.7	76.0	72.6	65.7	68.9	74.40	-
D.O. (mg/L)	5.5	5.3	5.0	4.8	4.4	4.6	4.94	4.49
Turbidity (NTU)	2.0	1.9	4.1	3.8	12.8	13.2	6.30	-
SS (mg/L)	5.0	2.0	4.0	4.0	4.0	3.0	3.67	-
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	01			Co-ore	dinates
Time (hh:mm)			5:51	-5:54			Northing	Easting
Water Depth (m)			16	5.2			22.21.892	113.55.213
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.2	29.2	28.7	28.6	28.6	28.4	28.78	-
Salinity (ppt)	25.5	25.5	26.9	27.1	27.2	27.6	26.63	-
pH	6.9	6.9	6.9	6.9	6.9	6.8	6.90	
D.O. Saturation (%)	79.0	79.9	76.2	74.1	74.1	71.0	75.72	-
D.O. (mg/L)	5.2	5.3	5.1	4.9	4.9	4.72	5.03	4.82
Turbidity (NTU)	2.9	2.8	4.0	3.8	5.3	5.9	4.12	-
SS (mg/L)	4.0	4.0	5.0	4.50	-			
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	02			Co-ord	dinates
Time (hh:mm)				Northing	Easting			
Water Depth (m)			14	1.2			22.21.651	113.55.899
Monitoring Depth (m)	1	.0	7	.1	13	3.2		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.5	28.5	28.0	28.4	27.8	27.8	28.18	-
Salinity (ppt)	27.5	27.5	28.5	27.7	28.8	28.8	28.13	-
pH	7.0	7.0	7.0	7.0	7.0	6.9	6.96	
D.O. Saturation (%)	70.4	71.2	63.8	68.1	63.2	62.7	66.57	-
D.O. (mg/L)	4.7	4.7	4.3	4.5	4.2	4.17	4.42	4.19
Turbidity (NTU)	8.6	8.7	15.7	15.1	26.7	26.5	16.88	-
SS (mg/L)	14.0	16.0	10.0	12.83	-			
Remarks			No	dredging wo	orks was obs	erved.	•	

Station			MF	PB1						
Time (hh:mm)										
Water Depth (m)			8	.4						
Monitoring Depth (m)	1	.0	4	.2	7	.4				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom		
Water Temperature (°C)	29.8	29.6	29.1	29.1	28.7	28.7	29.16	-		
Salinity (ppt)	17.9	18.6	22.2	22.1	25.1	24.9	21.78	-		
pH	6.6	6.7	6.8	6.8	6.8	6.8	6.72			
D.O. Saturation (%)	74.4	72.0	68.5	68.3	66.4	67.7	69.55	-		
D.O. (mg/L)	5.1	4.9	4.6	4.6	4.4	4.5	4.70	4.49		
Turbidity (NTU)	7.9	7.1	10.5	10.2	12.8	12.7	10.20	-		
SS (mg/L)	6.0	4.0	10.0	6.83	-					
Remarks		No dredging works was observed.								

Station			M	PB2								
Time (hh:mm)			6:22	-6:24								
Water Depth (m)												
Monitoring Depth (m)	1	.0	.4									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom				
							averaged					
Water Temperature (°C)	29.6	29.8	28.9	29.0	28.8	28.9	29.18	-				
Salinity (ppt)	18.1	17.7	23.5	22.4	24.4	23.9	21.68	-				
pH	6.7	6.7	6.8	6.8	6.8	6.8	6.74					
D.O. Saturation (%)	74.3	73.9	68.9	69.0	69.4	70.4	70.98	-				
D.O. (mg/L)	5.1	5.0	4.6	4.7	4.7	4.7	4.80	4.69				
Turbidity (NTU)	6.1	6.4	5.7	5.5	5.2	5.1	5.67	-				
SS (mg/L)	6.0	6.0	5.0	5.0	8.0	6.0	6.00	-				
Remarks		No dredging works was observed.										

Station			N	IP			1					
Time (hh:mm)			6:49	-6:51								
Water Depth (m)			5	.6								
Monitoring Depth (m)	1	.0										
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom				
Water Temperature (°C)	29.7	29.6	-	-	28.9	29.0	29.30	-				
Salinity (ppt)	19.3	17.9	-	-	23.2	23.6	20.99	-				
pH	6.6	6.6	-	-	6.7	6.6	6.63					
D.O. Saturation (%)	74.3	73.9	-	-	70.7	75.1	73.50	-				
D.O. (mg/L)	5.0	5.1	-	-	4.8	5.0	4.97	4.90				
Turbidity (NTU)	6.4	6.2	-	-	8.1	8.6	7.33	-				
SS (mg/L)	5.0	5.0	7.0	6.00	-							
Remarks		No dredging works was observed.										

Compliance with Action at	ia Limit Lev	<u>/ei</u>												
Parameter	As in	EM&A	C2*1	C2*130%		IMO1		IMO2		MPB1	MF	B2	MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	<b>Exceedance of Limit Level</b>	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.5	4.5	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.9	4.9	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	8.2	8.2	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	4.8	4.8	N	N	N	N	N	Ν	N	N	N	N

Sampling Date	09/22/08
Weather & Ambient Temperature	Cloudy, 30C

Station			C1 (	NM3)								
Time (hh:mm)			18:41	-18:44								
Water Depth (m)			16									
Monitoring Depth (m)	1	.0	8									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	29.5	29.4	29.2	29.2	28.1	28.3	28.95	-				
Salinity (ppt)	26.1	26.1	26.3	26.3	28.6	28.1	26.91	-				
pH	7.0	7.0	7.0	6.9	6.9	6.9	6.94					
D.O. Saturation (%)	80.2	81.9	71.9	71.9	66.4	68.5	73.47	-				
D.O. (mg/L)	5.3	5.4	4.8	4.8	4.4	4.6	4.87	4.49				
Turbidity (NTU)	2.1	1.9	3.5	3.7	9.7	9.6	5.08	-				
SS (mg/L)	4.0	4.0	4.0	3.0	5.0	4.0	4.00	-				
Remarks		No dredging works was observed.										

Station			C3 (	NM6)				
Time (hh:mm)			17:17	-17:19				
Water Depth (m)			6					
Monitoring Depth (m)	1	.0	3					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	30.1	30.0	29.2	29.2	29.2	29.2	29.48	-
Salinity (ppt)	17.5	17.6	22.8	22.8	23.3	23.4	21.23	-
pH	6.7	6.7	6.8	6.8	6.7	6.7	6.73	
D.O. Saturation (%)	74.0	73.7	68.5	68.9	69.2	68.6	70.48	-
D.O. (mg/L)	5.0	5.0	4.6	4.6	4.7	4.6	4.77	4.64
Turbidity (NTU)	5.7	5.2	5.3	5.2	5.8	5.4	5.43	-
SS (mg/L)	9.0	7.0	7.0	10.0	8.17	-		
Remarks				No dred	dging works	was observe	d.	

Station			IM	01			Co-ordinate	s				
Time (hh:mm)			18:18	-18:20			Northing	Easting				
Water Depth (m)			16	6.8			22.21.893	113.55.214				
Monitoring Depth (m)	1	.0	8	5.8								
Trial	Trial 1 Trial 2		Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	29.5 29.4		29.0	29.0	28.8	28.7	29.05	-				
Salinity (ppt)	25.2	25.5	26.6	26.7	27.2	27.4	26.42	-				
pH	6.9	6.9	6.9	6.9	6.9	6.9	6.93					
D.O. Saturation (%)	79.8	79.4	76.0	75.1	73.5	72.7	76.08	-				
D.O. (mg/L)	5.3	5.3	5.1	5.0	4.9	4.8	5.05	4.86				
Turbidity (NTU)	2.8	2.8	3.1	3.4	5.3	5.1	3.75	-				
SS (mg/L)	3.0	3.0	2.0	3.0	2.83	-						
Remarks		No dredging works was observed.										

Station			IIV	102			Co-ordinate	s			
Time (hh:mm)			18:28	-18:31			Northing	Easting			
Water Depth (m)			1-		22.21.651	113.55.897					
Monitoring Depth (m)	1	.0	7	3.4							
Trial	Trial 1 Trial 2		Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.6	28.7	28.2	28.4	28.0	28.0	28.31	-			
Salinity (ppt)	27.7	27.6	28.5	28.0	28.8	28.9	28.24	-			
pH	7.0	7.0	7.0	7.0	6.8	6.9	6.93				
D.O. Saturation (%)	70.2	70.6	63.5	66.6	64.8	61.1	66.13	-			
D.O. (mg/L)	4.7	4.7	4.2	4.4	4.3	4.1	4.40	4.20			
Turbidity (NTU)	9.0	9.0	12.9	12.5	26.1	26.6	16.02	-			
SS (mg/L)	32.0	34.0	15.0	14.0	20.17	-					
Remarks		No dredging works was observed.									

Station			MF	PB1							
Time (hh:mm)			17:47	-17:49							
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)	30.2	30.0	29.3	29.5	29.0	28.8	29.43	-			
Salinity (ppt)	18.1	18.9	22.9	21.6	24.8	26.0	22.04	-			
pH	6.7	6.7	6.7	6.7	6.8	6.8	6.72				
D.O. Saturation (%)	73.8	73.4	68.1	68.5	67.1	67.1	69.67	-			
D.O. (mg/L)	5.0	5.0	4.6	4.6	4.5	4.5	4.70	4.49			
Turbidity (NTU)	6.1	5.8	10.4	10.6	12.2	12.4	9.58	-			
SS (mg/L)	3.0	4.0	4.0	4.0	4.0	6.0	4.17	-			
Remarks		No dredging works was observed.									

Station			MF	PB2							
Time (hh:mm)			17:37	-17:39							
Water Depth (m)			8								
Monitoring Depth (m)	1	.0	4	.8							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	30.2	30.2	29.2	29.2	29.1	29.1	29.50	-			
Salinity (ppt)	17.3	17.2	22.6	22.9	23.9	23.7	21.27	-			
pH	6.7	6.7	6.8	6.8	6.8	6.8	6.74				
D.O. Saturation (%)	75.0	73.7	69.0	68.4	70.0	69.0	70.85	-			
D.O. (mg/L)	5.1	5.0	4.7	4.6	4.7	4.6	4.79	4.67			
Turbidity (NTU)	6.6	6.4	5.1	5.7	4.3	4.7	5.47	-			
SS (mg/L)	7.0	7.0	7.0	6.67	-						
Remarks	No dredging works was observed.										

Station			IV	IP								
Time (hh:mm)			18:05	-18:06								
Water Depth (m)			5									
Monitoring Depth (m)	1	.0	2									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom				
Water Temperature (°C)	29.8	30.0	-	-	29.1	29.1	29.50	-				
Salinity (ppt)	19.0	18.3	-	-	23.5	23.4	21.04	-				
pH	6.6	6.6	-	-	6.8	6.7	6.68					
D.O. Saturation (%)	72.7	73.4	-	-	71.2	70.4	71.93	-				
D.O. (mg/L)	4.9	5.0	-	-	4.8	4.7	4.87	4.77				
Turbidity (NTU)	6.3	6.9	-	-	9.7	9.8	8.18	-				
SS (mg/L)	7.0	8.0	-	7.0	7.00	-						
Remarks		No dredging works was observed.										

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	Mean(C1+C3)*130%		01	IMO2			MPB1	MPB2		IV	IP .
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.6	4.6	N	N	N	N	N	N	Z	N	N	N
DO (Depth-averaged)	4.2	4.0	4.8	4.8	N	N	N	N	N	N	Z	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	6.8	6.8	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	7.9	7.9	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/23/08
Weather & Ambient Temperature	Cloudy, 31C

Station			C2 (	NM5)			1	
Time (hh:mm)								
Water Depth (m)			19	9.4				
Monitoring Depth (m)	1	.0	9	.7	18	3.4		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	29.1	29.1	28.8	28.7	27.8	27.8	28.55	-
Salinity (ppt)	26.5	26.4	26.6	26.6	28.7	28.9	27.29	-
pH	7.5	7.5	7.4	7.4	7.3	7.3	7.40	
D.O. Saturation (%)	87.2	85.4	80.7	77.3	70.4	73.6	79.10	-
D.O. (mg/L)	5.8	5.7	5.4	5.2	4.8	5.0	5.31	4.86
Turbidity (NTU)	2.1	2.2	4.1	3.8	4.4	4.2	3.47	-
SS (mg/L)	5.0	3.0	2.0	3.0	4.0	4.0	3.50	-
Remarks			D	redging wor	ks was obse	rved.		

Station			IM	101			Co-or	dinates
Time (hh:mm)			8:03	-8:05			Northing	Easting
Water Depth (m)			22.21.888	113.55.216				
Monitoring Depth (m)	1	.0	8	3.2	15	5.4		•
Trial	Trial 1	Trial 1 Trial 2 Trial 1 Trial 2 Trial 1 Trial 2						Bottom
							averaged	
Water Temperature (°C)	29.0	29.0	28.6	28.5	28.5	28.3	28.65	-
Salinity (ppt)	25.8	25.7	27.2	27.3	27.4	27.8	26.87	-
pH	7.4	7.3	7.4	7.3	7.3	7.3	7.33	
D.O. Saturation (%)	83.7	84.6	80.9	78.8	78.8	75.7	80.42	-
D.O. (mg/L)	5.6	5.7	5.4	5.3	5.3	5.09	5.40	5.19
Turbidity (NTU)	3.9	3.8	4.0	3.8	5.3	5.9	4.45	-
SS (mg/L)	5.0	3.0	2.0	3.33	-			
Remarks			D	redging wor	ks was obse	rved.		

Station			IM	02			Co-ore	dinates
Time (hh:mm)			7:52	-7:55			Northing	Easting
Water Depth (m)			14	4.0			22.21.655	113.55.903
Monitoring Depth (m)	1	.0	7	.0	13	3.0		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.4	28.4	27.9	28.3	27.7	27.7	28.05	-
Salinity (ppt)	27.7	27.7	28.7	28.0	29.0	29.0	28.37	-
pH	7.4	7.4	7.4	7.4	7.4	7.4	7.39	
D.O. Saturation (%)	75.1	75.9	68.5	72.8	67.9	67.4	71.27	-
D.O. (mg/L)	5.0	5.1	4.6	4.9	4.6	4.54	4.79	4.56
Turbidity (NTU)	4.6	4.7	5.3	5.1	5.7	5.5	5.15	-
SS (mg/L)	3.0	2.0	4.0	4.0	5.0	3.0	3.50	-
Remarks		-	D	redging worl	ks was obse	rved.	-	-

\*No monitoring was conducted during the mid-flood tidal period due to the hoisted typhoon signal (T3)

Station			MF	PB1				
Time (hh:mm)								
Water Depth (m)			8	.4				
Monitoring Depth (m)	1	.0	4	.2	7	.4		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.7	29.5	28.9	29.0	28.6	28.6	29.03	-
Salinity (ppt)	18.1	18.8	22.4	22.3	25.3	25.2	22.02	-
pH	7.1	7.1	7.2	7.2	7.2	7.2	7.15	
D.O. Saturation (%)	79.1	76.7	73.2	73.0	71.1	72.4	74.25	-
D.O. (mg/L)	5.4	5.3	5.0	5.0	4.8	4.9	5.07	4.86
Turbidity (NTU)	5.9	6.1	6.5	6.2	6.8	6.7	6.37	-
SS (mg/L)	4.0	4.0	3.0	3.67	-			
Remarks		-	D	redging wor	ks was obse	rved.		

Station			MF	PB2				
Time (hh:mm)								
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-	Bottom
							averaged	
Water Temperature (°C)	29.5	29.7	28.8	28.9	28.7	28.8	29.05	-
Salinity (ppt)	18.4	17.9	23.7	22.7	24.7	24.2	21.92	-
pH	7.1	7.1	7.2	7.2	7.2	7.2	7.17	
D.O. Saturation (%)	79.0	78.6	73.6	73.7	74.1	75.1	75.68	-
D.O. (mg/L)	5.4	5.4	5.0	5.0	5.0	5.1	5.17	5.06
Turbidity (NTU)	5.1	5.4	5.2	5.5	5.7	6.1	5.50	-
SS (mg/L)	4.0	2.0	5.0	3.0	4.0	2.0	3.33	-
Remarks			D	redging wor	ks was obse	rved.		

Station			N	IP			1	
Time (hh:mm)			9:01	-9:03				
Water Depth (m)			5	.6				
Monitoring Depth (m)	1	.0	2	.9	4	.7		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	29.6	29.5	-	-	28.8	28.9	29.17	-
Salinity (ppt)	19.6	18.1	-	-	23.4	23.8	21.23	-
pH	7.0	7.0	-	-	7.1	7.1	7.06	
D.O. Saturation (%)	79.0	78.6	-	-	75.4	79.8	78.20	-
D.O. (mg/L)	5.4	5.4	-	-	5.1	5.4	5.34	5.27
Turbidity (NTU)	5.4	5.2	-	-	6.8	6.6	6.00	-
SS (mg/L)	2.0	3.0	-	-	4.0	4.0	3.25	-
Remarks		•	D	redging wor	ks was obse	rved.	•	

Compliance with Action at	ia Limit Lev	<u>/ei</u>												
Parameter	As in	EM&A	C2*1	30%	IMO1		IM	IMO2		MPB1	MPB2		MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.9	4.9	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.3	5.3	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	4.5	4.5	N	N	N	N	N	N	Ν	N	N	N
SS (Depth-averaged)	24.0	37.0	4.6	4.6	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/25/08
Weather & Ambient Temperature	Sunny, 31C

Station	1		C2 (	NM5)			1	
			<u> </u>	-10:16			_	
Time (hh:mm)								
Water Depth (m)			20	0.0				
Monitoring Depth (m)	1	.0	10	0.0	19	9.0		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	28.0	28.0	27.4	27.4	27.2	27.2	27.52	-
Salinity (ppt)	23.1	23.1	28.1	28.0	29.1	29.1	26.76	-
pH	7.0	7.0	7.1	7.1	7.1	7.1	7.06	
D.O. Saturation (%)	79.8	78.9	75.7	76.7	79.1	79.3	78.25	-
D.O. (mg/L)	5.5	5.4	5.1	5.2	5.3	5.4	5.32	5.34
Turbidity (NTU)	10.9	10.6	11.5	11.7	13.8	14.2	12.12	-
SS (mg/L)	9.0	11.0	12.0	10.0	10.0	10.0	10.33	-
Remarks			D	redging wor	ks was obse	rved.	•	

Station			IM	101			Co-ore	dinates
Time (hh:mm)			10:00	-10:03			Northing	Easting
Water Depth (m)			19	9.6			22.21.924	113.55.210
Monitoring Depth (m)	1	.0	9	.8	18	3.6		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	28.3	28.3	26.9	26.9	26.8	26.8	27.33	-
Salinity (ppt)	29.1	29.0	30.1	30.0	30.5	30.5	29.86	-
pH	7.1	7.1	7.1	7.1	7.2	7.2	7.13	
D.O. Saturation (%)	79.1	78.5	72.4	73.7	75.3	75.0	75.67	-
D.O. (mg/L)	5.3	5.3	4.9	4.8	5.1	5.05	5.06	5.06
Turbidity (NTU)	17.7	17.4	19.6	19.2	20.9	21.3	19.35	-
SS (mg/L)	20.0	20.0 22.0 21.0 22.0 21.0 21.0						-
Remarks		•		redging wor	ks was obse	rved.		

Station			IM	02			Co-ord	dinates
Time (hh:mm)			9:50	-9:52			Northing	Easting
Water Depth (m)			14	4.6			22.21.646	113.55.888
Monitoring Depth (m)	1	.0	7	.3	13	3.6		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom
Water Temperature (°C)	27.7	27.7	26.9	26.9	26.7	26.7	27.09	-
Salinity (ppt)	29.6	29.6	30.5	30.4	30.7	30.7	30.24	-
pH	7.1	7.1	7.1	7.1	7.0	7.1	7.07	
D.O. Saturation (%)	79.6	80.3	78.3	77.4	79.3	77.9	78.80	-
D.O. (mg/L)	5.3	5.4	5.3	5.2	5.4	5.32	5.30	5.34
Turbidity (NTU)	10.0	10.3	10.8	11.2	12.3	12.5	11.18	-
SS (mg/L)	11.0	12.0	11.0	13.0	12.0	12.0	11.83	-
Remarks		-	D	redging worl	ks was obse	rved.		

Station			M	PB1			1				
Time (hh:mm)			10:53	-10:55							
Water Depth (m)											
Monitoring Depth (m)	1	.0	3	.5	6	.0					
Trial	Trial 1										
Water Temperature (°C)	28.2	28.2	27.9	27.8	27.6	27.7	27.90	-			
Salinity (ppt)	23.0	22.9	25.2	25.2	26.9	26.9	24.98	-			
pH	7.0	7.0	7.0	7.1	7.1	7.1	7.04				
D.O. Saturation (%)	81.3	80.1	80.3	79.7	83.3	82.3	81.17	-			
D.O. (mg/L)	5.6	5.5	5.5	5.4	5.7	5.6	5.54	5.62			
Turbidity (NTU)	7.1	6.8	7.8	7.9	8.3	8.5	7.73	-			
SS (mg/L)	6.0	7.0	8.0	6.67	-						
Remarks		Dredging works was observed.									

Station			MF	PB2							
Time (hh:mm)											
Water Depth (m)											
Monitoring Depth (m)	1	.0	4	.1	7	.2					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	28.2	28.2	27.9	27.9	27.8	27.8	27.97	-			
Salinity (ppt)	23.2	23.3	25.4	25.5	25.7	25.9	24.82	-			
pH	7.0	7.0	7.1	7.1	7.1	7.1	7.06				
D.O. Saturation (%)	81.3	81.1	81.9	82.2	82.9	83.9	82.22	-			
D.O. (mg/L)	5.6	5.6	5.6	5.6	5.7	5.7	5.61	5.68			
Turbidity (NTU)	6.0	6.1	6.5	6.4	7.2	6.9	6.52	-			
SS (mg/L)	6.0	6.0 7.0 8.0 8.0 8.0 7.0 7.33 -									
Remarks			D	redging wor	ks was obse	rved.					

Station			N	IP			1			
Time (hh:mm)			10:37	-10:39						
Water Depth (m)										
Monitoring Depth (m)	1	.0	2	.8	4	.5				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom		
Water Temperature (°C)	28.2	28.2	-	-	27.8	27.8	27.99	-		
Salinity (ppt)	24.3	24.5	-	-	25.4	25.5	24.90	-		
pH	7.0	7.1	-	-	7.1	7.1	7.06			
D.O. Saturation (%)	87.7	86.8	-	-	89.5	89.0	88.25	-		
D.O. (mg/L)	6.0	6.0	-	-	6.1	6.0	6.02	6.07		
Turbidity (NTU)	15.8	16.1	-	-	17.9	18.0	16.95	-		
SS (mg/L)	5.3	5.3 5.4 20.0 18.0								
Remarks		Dredging works was observed.								

Compliance with Action at	ia Limit Lev	<u>'eı</u>												
Parameter	As in	EM&A	C2*1	30%	IMO1		IM	02		MPB1	MF	MPB2		(P
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	5.3	5.3	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.3	5.3	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	15.8	15.8	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	13.4	13.4	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/25/08
Weather & Ambient Temperature	Fine, 31C

Station			C1 (	NM3)							
Time (hh:mm)			18:06								
Water Depth (m)			15								
Monitoring Depth (m)	1	.0	7								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	27.3	27.4	26.6	26.6	26.5	26.5	26.84	-			
Salinity (ppt)	30.1	30.0	30.9	31.0	31.2	31.1	30.71	-			
pH	6.9	6.9	6.9	6.9	6.9	6.9	6.90				
D.O. Saturation (%)	80.5	80.1	76.8	75.2	81.8	81.0	79.23	-			
D.O. (mg/L)	5.4	5.4	5.2	5.1	5.5	5.5	5.32	5.49			
Turbidity (NTU)	9.4	9.3	10.6	10.8	11.2	11.4	10.45	-			
SS (mg/L)	6.0	5.0	11.0	10.0	8.50	-					
Remarks		Dredging works was observed.									

Station			C3 (	NM6)							
Time (hh:mm)			16:23	-16:25							
Water Depth (m)			6								
Monitoring Depth (m)	1	.0	3	.2	5	.4					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	28.0	27.9	27.4	27.4	27.3	27.3	27.55	-			
Salinity (ppt)	26.1	26.1	27.6	27.6	27.9	28.0	27.24	-			
pH	7.1	7.1	7.1	7.1	7.1	7.1	7.09				
D.O. Saturation (%)	80.1	79.2	78.8	78.9	80.9	81.4	79.88	-			
D.O. (mg/L)	5.4	5.4	5.3	5.3	5.5	5.5	5.41	5.49			
Turbidity (NTU)	12.0	12.2	13.5	13.57	-						
SS (mg/L)	8.0	8.0	11.0	9.0	9.17	-					
Remarks		Dredging works was observed.									

Station			IM	01			Co-ordinate	s			
Time (hh:mm)			17:40	-17:42			Northing	Easting			
Water Depth (m)			19	9.0		22.21.928	113.55.200				
Monitoring Depth (m)	1	.0	9								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	27.7	27.7	27.2	27.2	26.7	26.7	27.20	-			
Salinity (ppt)	28.7	28.6	30.1	30.1	30.6	30.5	29.76	-			
pH	7.1	7.1	7.1	7.1	7.1	7.1	7.12				
D.O. Saturation (%)	77.5	76.1	70.7	71.2	75.3	75.0	74.30	-			
D.O. (mg/L)	5.2	5.1	4.7	4.7	5.1	5.0	4.97	5.06			
Turbidity (NTU)	15.8	16.2	16.6	17.2	18.8	18.9	17.25	-			
SS (mg/L)	21.0	21.0	20.0	22.0	20.0	21.00	-				
Remarks		Dredging works was observed.									

Station			IIV	102			Co-ordinate	s		
Time (hh:mm)			17:51	-17:53			Northing	Easting		
Water Depth (m)			1-		22.21.652	113.55.895				
Monitoring Depth (m)	1	.0	7	3.2						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	27.5	27.5	26.8	26.7	26.6	26.6	26.95	-		
Salinity (ppt)	28.3	28.3	30.0	30.0	30.6	30.6	29.63	-		
pH	7.1	7.1	7.1	7.1	7.1	7.1	7.07			
D.O. Saturation (%)	76.2	77.2	74.8	74.9	75.9	76.7	75.95	-		
D.O. (mg/L)	5.1	5.2	5.1	5.0	5.1	5.2	5.11	5.14		
Turbidity (NTU)	11.6	11.9	12.4	11.9	13.2	12.9	12.32	-		
SS (mg/L)	12.0	12.0	11.0	12.0	11.50	-				
Remarks		Dredging works was observed.								

Station			MF	PB1					
Time (hh:mm)			16:56	-16:58					
Water Depth (m)			6						
Monitoring Depth (m)	1	.0	3						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	28.1	28.1	27.7	27.8	27.5	27.5	27.77	-	
Salinity (ppt)	23.1	23.2	25.3	25.2	26.7	26.6	24.99	-	
pH	7.0	7.0	7.1	7.0	7.1	7.1	7.05		
D.O. Saturation (%)	80.7	80.3	79.9	79.6	82.5	81.5	80.75	-	
D.O. (mg/L)	5.5	5.5	5.5	5.4	5.6	5.5	5.51	5.57	
Turbidity (NTU)	6.6	6.4	7.4	7.2	7.7	7.9	7.20	-	
SS (mg/L)	9.0	8.0	8.0	6.0	7.0	7.0	7.50	-	
Remarks	Dredging works was observed.								

Station			MF	PB2					
Time (hh:mm)			16:48						
Water Depth (m)			8						
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)	28.0	28.0	27.9	27.9	27.9	27.9	27.93	-	
Salinity (ppt)	23.5	23.4	24.1	24.0	24.2	24.1	23.88	-	
pH	7.0	7.0	7.0	7.0	7.1	7.1	7.05		
D.O. Saturation (%)	82.0	81.7	82.6	82.7	83.1	82.9	82.50	-	
D.O. (mg/L)	5.6	5.6	5.7	5.7	5.7	5.7	5.64	5.67	
Turbidity (NTU)	6.8	6.7	7.4	7.2	8.3	8.5	7.48	-	
SS (mg/L)	8.0	8.0 9.0 9.0 8.0 7.0 7.0 8.00							
Remarks	Dredging works was observed.								

Station			IV	IP						
Time (hh:mm)			17:13	-17:14						
Water Depth (m)			5							
Monitoring Depth (m)	1.	.0	2	.3						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.0	28.0	-	-	27.6	27.6	27.79	-		
Salinity (ppt)	24.7 24.8 26.0 26.2						25.42	-		
pH	7.1	7.1 7.1 7.1 7.1								
D.O. Saturation (%)	89.0	89.9	-	-	90.5	90.2	89.90	-		
D.O. (mg/L)	6.1	6.1	-	-	6.2	6.1	6.12	6.14		
Turbidity (NTU)	18.5	18.2	-	-	19.7	19.4	18.95	-		
SS (mg/L)	20.0	22.0	-	-	20.0	19.0	20.25	-		
Remarks		Dredging works was observed.								

Compliance with Action an	Compliance with Action and Limit Level													
Parameter	As in	EM&A	Mean(C1-	Mean(C1+C3)*130%		01	IMO2			MPB1	MPB2		MP	
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action Exceedance Ex		Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	5.5	5.5	N	N	N	N	N	N	Z	N	N	N
DO (Depth-averaged)	4.2	4.0	5.4	5.4	N	N	N	N	N	N	Z	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	15.6	15.6	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	11.5	11.5	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/25/08
Weather & Ambient Temperature	Sunny, 31C

Station	1		C2 (	NM5)			1				
			<u> </u>	-10:16			_				
Time (hh:mm)											
Water Depth (m)											
Monitoring Depth (m)	1	.0	10	0.0	19	9.0					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	28.0	28.0	27.4	27.4	27.2	27.2	27.52	-			
Salinity (ppt)	23.1	23.1	28.1	28.0	29.1	29.1	26.76	-			
pH	7.0	7.0	7.1	7.1	7.1	7.1	7.06				
D.O. Saturation (%)	79.8	78.9	75.7	76.7	79.1	79.3	78.25	-			
D.O. (mg/L)	5.5	5.4	5.1	5.2	5.3	5.4	5.32	5.34			
Turbidity (NTU)	10.9	10.6	11.5	11.7	13.8	14.2	12.12	-			
SS (mg/L)	9.0	11.0	10.33	-							
Remarks		Dredging works was observed.									

Station			IM	101			Co-ore	dinates	
Time (hh:mm)			10:00	-10:03			Northing	Easting	
Water Depth (m)			22.21.924	113.55.210					
Monitoring Depth (m)	1	.0							
Trial	Trial 1	Trial 2	Trial 1 Trial 2 Trial 1 Trial 2		Trial 2	Depth- averaged	Bottom		
Water Temperature (°C)	28.3	28.3	26.9	26.9	26.8	26.8	27.33	-	
Salinity (ppt)	29.1	29.0	30.1	30.0	30.5	30.5	29.86	-	
pH	7.1	7.1	7.1	7.1	7.2	7.2	7.13		
D.O. Saturation (%)	79.1	78.5	72.4	73.7	75.3	75.0	75.67	-	
D.O. (mg/L)	5.3	5.3	4.9	4.8	5.1	5.05	5.06	5.06	
Turbidity (NTU)	17.7	17.4	19.6	19.2	20.9	21.3	19.35	-	
SS (mg/L)	20.0	22.0	21.0	21.0	21.17	-			
Remarks	Dredging works was observed.								

Station			IM	02			Co-ord	dinates
Time (hh:mm)			9:50	-9:52			Northing	Easting
Water Depth (m)				22.21.646	113.55.888			
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1 Trial 2		Depth- averaged	Bottom
Water Temperature (°C)	27.7	27.7	26.9	26.9	26.7	26.7	27.09	-
Salinity (ppt)	29.6	29.6	30.5	30.4	30.7	30.7	30.24	-
pH	7.1	7.1	7.1	7.1	7.0	7.1	7.07	
D.O. Saturation (%)	79.6	80.3	78.3	77.4	79.3	77.9	78.80	-
D.O. (mg/L)	5.3	5.4	5.3	5.2	5.4	5.32	5.30	5.34
Turbidity (NTU)	10.0	10.3	10.8	11.2	12.3	12.5	11.18	-
SS (mg/L)	11.0	12.0	11.0	13.0	12.0	12.0	11.83	-
Remarks	Dredging works was observed.							

Station			M	PB1			1				
Time (hh:mm)			10:53	-10:55							
Water Depth (m)			7	.0							
Monitoring Depth (m)	1	.0									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom			
Water Temperature (°C)	28.2	28.2	27.9	27.8	27.6	27.7	27.90	-			
Salinity (ppt)	23.0	22.9	25.2	25.2	26.9	26.9	24.98	-			
pH	7.0	7.0	7.0	7.1	7.1	7.1	7.04				
D.O. Saturation (%)	81.3	80.1	80.3	79.7	83.3	82.3	81.17	-			
D.O. (mg/L)	5.6	5.5	5.5	5.4	5.7	5.6	5.54	5.62			
Turbidity (NTU)	7.1	6.8	7.8	7.9	8.3	8.5	7.73	-			
SS (mg/L)	6.0	7.0	6.67	-							
Remarks		Dredging works was observed.									

Station			MF	PB2					
Time (hh:mm)			11:02	-11:04					
Water Depth (m)									
Monitoring Depth (m)	1	.0							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom	
							averaged		
Water Temperature (°C)	28.2	28.2	27.9	27.9	27.8	27.8	27.97	-	
Salinity (ppt)	23.2	23.3	25.4	25.5	25.7	25.9	24.82	-	
pH	7.0	7.0	7.1	7.1	7.1	7.1	7.06		
D.O. Saturation (%)	81.3	81.1	81.9	82.2	82.9	83.9	82.22	-	
D.O. (mg/L)	5.6	5.6	5.6	5.6	5.7	5.7	5.61	5.68	
Turbidity (NTU)	6.0	6.1	6.5	6.4	7.2	6.9	6.52	-	
SS (mg/L)	6.0	7.0	7.33	-					
Remarks	Dredging works was observed.								

Station			N	IP			1			
Time (hh:mm)			10:37	-10:39						
Water Depth (m)										
Monitoring Depth (m)	1	.0								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom		
Water Temperature (°C)	28.2	28.2	-	-	27.8	27.8	27.99	-		
Salinity (ppt)	24.3	24.5	-	-	25.4	25.5	24.90	-		
pH	7.0	7.1	-	-	7.1	7.1	7.06			
D.O. Saturation (%)	87.7	86.8	-	-	89.5	89.0	88.25	-		
D.O. (mg/L)	6.0	6.0	-	-	6.1	6.0	6.02	6.07		
Turbidity (NTU)	15.8	16.1	-	-	17.9	18.0	16.95	-		
SS (mg/L)	5.3	5.4	12.17	-						
Remarks		Dredging works was observed.								

Compliance with Action at	Compliance with Action and Limit Level													
Parameter	As in	EM&A	C2*1	30%	IIV	IMO1 IMO		MPB1		MF	MPB2		(P	
	Action Limit		Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc Exceedance of Limit Level		Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	5.3	5.3	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.3	5.3	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	15.8	15.8	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	13.4	13.4	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/26/08
Weather & Ambient Temperature	Fine, 31C

Station			C1 (	NM3)							
Time (hh:mm)			18:18	-18:19							
Water Depth (m)			15	5.8							
Monitoring Depth (m)	1	.0	7								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	29.1	29.2	28.8	28.7	27.9	28.2	28.63	-			
Salinity (ppt)	26.4	26.3	26.5	26.5	28.8	28.3	27.14	-			
pH	7.1	7.1	7.1	7.1	7.0	7.1	7.08				
D.O. Saturation (%)	83.7	82.0	73.8	73.8	68.3	70.4	75.33	-			
D.O. (mg/L)	5.5	5.4	4.9	4.9	4.6	4.7	5.00	4.62			
Turbidity (NTU)	4.9	4.7	5.9	5.3	8.5	8.4	6.28	-			
SS (mg/L)	4.0	6.0	6.0	5.0	4.0	4.0	4.83	-			
Remarks		Dredging works was observed.									

Station			C3 (	NM6)							
Time (hh:mm)			16:52	:-16:53							
Water Depth (m)											
Monitoring Depth (m)	1	.0	3								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	29.1	28.6	29.0	28.4	28.2	29.1	28.73	-			
Salinity (ppt)	17.7	17.9	23.0	23.0	23.5	23.6	21.46	-			
pH	7.0	6.9	6.9	6.9	6.9	6.9	6.91				
D.O. Saturation (%)	75.8	75.6	70.8	70.4	71.0	70.5	72.35	-			
D.O. (mg/L)	5.2	5.2	4.8	4.7	4.8	4.7	4.89	4.76			
Turbidity (NTU)	5.7	5.5	6.2	6.3	6.9	7.2	6.30	-			
SS (mg/L)	7.0	7.0	4.0	5.0	5.0	5.0	5.50	-			
Remarks		Dredging works was observed.									

Station			IM	01			Co-ordinate	s		
Time (hh:mm)			17:56	-17:57			Northing	Easting		
Water Depth (m)			15	5.8			22.21.895	113.55.216		
Monitoring Depth (m)	1	.0	7	.9	14	1.8				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	29.1	29.2	28.6	28.6	28.2	28.2	28.63	-		
Salinity (ppt)	25.7	25.5	26.9	26.8	27.4	27.7	26.65	-		
pH	7.1	7.0	7.1	7.0	7.0	7.0	7.04			
D.O. Saturation (%)	81.2	81.6	77.0	77.9	75.4	74.6	77.95	-		
D.O. (mg/L)	5.4	5.4	5.1	5.2	5.0	5.0	5.18	4.99		
Turbidity (NTU)	5.1	5.2	5.9	5.8	6.2	6.3	5.75	-		
SS (mg/L)	8.0	6.0	4.0	5.0	7.0	5.0	5.83	-		
Remarks		Dredging works was observed.								

Station			IM	02			Co-ordinate	es		
Time (hh:mm)			18:06	-18:07			Northing	Easting		
Water Depth (m)			13	3.4		22.21.653	13.55.895			
Monitoring Depth (m)	1	1.0 6.7 12.4								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	28.5	28.4	28.1	27.9	27.6	27.5	28.02	-		
Salinity (ppt)	27.8	27.9	28.2	28.7	29.1	29.1	28.47	-		
pH	7.1	7.1	7.1	7.1	7.0	7.1	7.09			
D.O. Saturation (%)	72.4	72.0	68.5	65.4	66.7	63.0	68.00	-		
D.O. (mg/L)	4.8	4.8	4.6	4.4	4.5	4.2	4.52	4.33		
Turbidity (NTU)	5.4	5.5	6.8	6.9	8.1	7.8	6.75	-		
SS (mg/L)	8.0	7.0	4.0	3.0	4.0	6.0	5.33	-		
Remarks		Dredging works was observed.								

Station			MF	PB1					
Time (hh:mm)			17:23	-17:24					
Water Depth (m)			8						
Monitoring Depth (m)	1	.0	4						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	28.4	29.1	27.9	28.7	28.8	28.9	28.63	-	
Salinity (ppt)	18.4	19.2	21.8	23.1	26.2	25.0	22.27	-	
pH	6.9	6.8	6.9	6.9	6.9	6.9	6.90		
D.O. Saturation (%)	75.6	75.3	70.4	70.0	68.9	69.0	71.53	-	
D.O. (mg/L)	5.1	5.1	4.8	4.7	4.6	4.6	4.82	4.61	
Turbidity (NTU)	6.1	5.9	7.7	7.4	8.4	8.2	7.28	-	
SS (mg/L)	5.0	7.0	5.0	6.0	7.0	5.0	5.83	-	
Remarks		Dredging works was observed.							

Station			MF	B2						
Time (hh:mm)			17:13	-17:14						
Water Depth (m)			8							
Monitoring Depth (m)	1	.0	4							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	29.3	29.0	28.4	28.2	28.7	28.7	28.70	-		
Salinity (ppt)	17.5	17.6	23.1	22.8	24.0	24.1	21.50	-		
pH	6.8	6.9	6.9	7.0	7.0	7.0	6.92			
D.O. Saturation (%)	75.6	76.8	70.3	70.9	70.9	71.9	72.73	-		
D.O. (mg/L)	5.2	5.2	4.7	4.8	4.8	4.8	4.91	4.80		
Turbidity (NTU)	6.1	5.9	6.8	6.7	7.7	7.3	6.75	-		
SS (mg/L)	6.0	5.0	8.0	6.0	7.0	6.0	6.33	-		
Remarks		Dredging works was observed.								

Station			IV	IP					
Time (hh:mm)			17:42	-17:42					
Water Depth (m)			5						
Monitoring Depth (m)	1	.0	2						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	39.4	29.4	-	-	28.2	28.1	31.27	-	
Salinity (ppt)	18.5	19.2	-	-	23.7	23.6	21.26	-	
pH	6.8	6.8	-	-	6.9	6.9	6.85		
D.O. Saturation (%)	75.3	74.5	-	-	73.1	72.3	73.80	-	
D.O. (mg/L)	5.1	5.1	-	-	4.9	4.9	4.99	4.90	
Turbidity (NTU)	6.4	6.1	-	-	9.3	9.1	7.73	-	
SS (mg/L)	4.0	4.0	-	-	5.0	5.0	4.50	-	
Remarks		Dredging works was observed.							

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	+C3)*130%	IIV	101	IMO2	IMO2		MPB1	MF	MPB2		/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.7	4.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	4.9	4.9	N	N	N	N	N	N	Z	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	8.2	8.2	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	6.7	6.7	N	Ν	N	N	N	N	N	N	N	N

Sampling Date	09/29/08
Weather & Ambient Temperature	Cloudy, 32C

Station			C2 (	NM5)			1	
Time (hh:mm)								
Water Depth (m)			19	9.4				
Monitoring Depth (m)	1	.0	9	.7	18	3.4		
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.9	29.9	29.7	29.6	28.7	28.6	29.39	-
Salinity (ppt)	29.0	28.9	29.2	29.1	31.2	31.5	29.82	-
pH	8.2	8.2	8.2	8.1	8.1	8.1	8.14	
D.O. Saturation (%)	88.0	86.2	81.5	78.1	71.2	74.4	79.90	-
D.O. (mg/L)	5.9	5.8	5.5	5.3	4.8	5.0	5.37	4.92
Turbidity (NTU)	4.3	4.2	5.3	5.2	8.7	8.9	6.10	-
SS (mg/L)	6.0	5.0	6.0	6.0	5.0	6.0	5.67	-
Remarks			No	dredging wo	orks was obs	erved.		

Station			IM	01			Co-ore	dinates
Time (hh:mm)			12:14	-12:16			Northing	Easting
Water Depth (m)			16	5.2			22.21.888	113.55.213
Monitoring Depth (m)	1.0 8.1 15.2							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.9	29.9	29.5	29.3	29.3	29.1	29.49	-
Salinity (ppt)	28.3	28.2	29.7	29.9	30.0	30.4	29.40	-
pH	8.1	8.1	8.1	8.1	8.1	8.0	8.07	
D.O. Saturation (%)	84.5	85.4	81.7	79.6	79.6	76.5	81.22	-
D.O. (mg/L)	5.7	5.7	5.5	5.4	5.4	5.15	5.46	5.25
Turbidity (NTU)	4.7	4.7	5.3	5.2	5.9	6.2	5.33	-
SS (mg/L)	6.0	5.0	7.0	6.0	5.0	5.0	5.67	-
Remarks			No	dredging wo	orks was obs	erved.		

Station			IM	02			Co-ore	dinates					
Time (hh:mm)				Northing	Easting								
Water Depth (m)			14	1.2			22.21.651	113.55.900					
Monitoring Depth (m)	1	.0	7	.1	13	3.2							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom					
							averaged						
Water Temperature (°C)	29.2	29.2	28.7	29.1	28.6	28.6	28.89	-					
Salinity (ppt)	30.2	30.3	31.3	30.5	31.6	31.6	30.90	-					
pH	8.1	8.2	8.1	8.1	8.1	8.1	8.13						
D.O. Saturation (%)	75.9	76.7	69.3	73.6	68.7	68.2	72.07	-					
D.O. (mg/L)	5.1	5.2	4.7	5.0	4.6	4.60	4.85	4.62					
Turbidity (NTU)	7.6	7.6	8.6	8.3	9.1	9.0	8.37	-					
SS (mg/L)	6.0	5.0	7.0	6.0	6.0	5.0	5.83	-					
Remarks			No	dredging wo	No dredging works was observed.								

Station			MF	PB1						
Time (hh:mm)										
Water Depth (m)			8	.4						
Monitoring Depth (m)	1	.0	4	.2	7	.4				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom		
Water Temperature (°C)	30.6	30.4	29.8	29.8	29.4	29.4	29.87			
Salinity (ppt)	20.6	21.4	24.9	24.9	27.8	27.7	24.55			
pH	7.8	7.8	7.9	7.9	8.0	7.9	7.89			
D.O. Saturation (%)	79.9	77.5	74.0	73.8	71.9	73.2	75.05			
D.O. (mg/L)	5.5	5.3	5.1	5.0	4.9	5.0	5.13	4.92		
Turbidity (NTU)	7.2	6.8	8.5	8.4	9.2	9.1	8.20	-		
SS (mg/L)	5.0	6.0	5.0	7.0	6.0	6.0	5.83	-		
Remarks		No dredging works was observed.								

Station			MF	PB2					
Time (hh:mm)									
Water Depth (m)			9	.4					
Monitoring Depth (m)	1	.0	4	.7	8	.4			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom	
							averaged		
Water Temperature (°C)	30.3	30.5	29.7	29.7	29.5	29.6	29.89	-	
Salinity (ppt)	20.9	20.5	26.3	25.2	27.2	26.7	24.45	-	
pH	7.9	7.9	8.0	7.9	7.9	7.9	7.91		
D.O. Saturation (%)	79.8	79.4	74.4	74.5	74.9	75.9	76.48	-	
D.O. (mg/L)	5.5	5.5	5.1	5.1	5.1	5.2	5.23	5.12	
Turbidity (NTU)	6.3	6.5	6.1	6.0	5.9	5.8	6.10	-	
SS (mg/L)	6.0	6.0	6.0	7.0	6.0	7.0	6.33	-	
Remarks	No dredging works was observed.								

Station			N	/IP						
Time (hh:mm)			13:12	-13:13						
Water Depth (m)										
Monitoring Depth (m)	1	1.0 2.9 4.7								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- averaged	Bottom		
Water Temperature (°C)	30.4	30.3	-	-	29.6	29.7	30.01	-		
Salinity (ppt)	22.1	20.6			26.0	26.3	23.76	-		
pH	7.8	7.8	-	-	7.9	7.8	7.80			
D.O. Saturation (%)	79.8	79.4	-	-	76.2	80.6	79.00	-		
D.O. (mg/L)	5.5	5.5	-	-	5.2	5.5	5.40	5.33		
Turbidity (NTU)	6.5	6.4	-	-	7.3	7.6	6.95	-		
SS (mg/L)	4.8	5.0	5.21	-						
Remarks	No dredging works was observed.									

Compliance with Action at	oniphance with Action and Limit Level													
Parameter	As in	EM&A	C2*1	C2*130% IMO1		IM	IMO2		MPB1	MPB2		MP		
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.9	4.9	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.4	5.4	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	7.9	7.9	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	7.4	7.4	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/29/08
Weather & Ambient Temperature	Cloudy, 31C

Station			C1 (	NM3)						
Time (hh:mm)			18:41	-18:44						
Water Depth (m)			16							
Monitoring Depth (m)	1	.0	8							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	30.2	30.1	29.9	29.9	28.9	29.0	29.66	-		
Salinity (ppt)	28.9	28.9	29.1	29.0	31.4	30.9	29.68	-		
pH	8.1	8.2	8.1	8.1	8.1	8.1	8.11			
D.O. Saturation (%)	85.7	87.4	77.4	77.4	71.9	74.0	78.97	-		
D.O. (mg/L)	5.7	5.9	5.2	5.2	4.9	5.0	5.30	4.92		
Turbidity (NTU)	4.3	4.2	5.0	5.1	8.1	8.1	5.80	-		
SS (mg/L)	8.0	9.0	7.0	7.0	7.67	-				
Remarks		No dredging works was observed.								

Station			C3 (	NM6)						
Time (hh:mm)			17:17	-17:19						
Water Depth (m)			6							
Monitoring Depth (m)	1	.0	3							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	30.8	30.7	29.9	29.9	29.9	29.9	30.19	-		
Salinity (ppt)	20.3	20.4	25.6	25.6	26.1	26.1	24.00	-		
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.90			
D.O. Saturation (%)	79.5	79.2	74.0	74.4	74.7	74.1	75.98	-		
D.O. (mg/L)	5.5	5.5	5.0	5.1	5.1	5.0	5.20	5.07		
Turbidity (NTU)	6.1	5.9	5.9	5.9	6.2	6.0	6.00	-		
SS (mg/L)	7.0	7.0	6.0	6.67	-					
Remarks		No dredging works was observed.								

Station			IM	01			Co-ordinate	S		
Time (hh:mm)			18:18	-18:20			Northing	Easting		
Water Depth (m)			16	6.8			22.21.893	113.55.214		
Monitoring Depth (m)	1	.0	8							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	30.2	30.1	29.7	29.7	29.5	29.4	29.76	-		
Salinity (ppt)	28.0	28.3	29.3	29.4	29.9	30.2	29.19	-		
pH	8.1	8.1	8.1	8.1	8.1	8.1	8.10			
D.O. Saturation (%)	85.3	84.9	81.5	80.6	79.0	78.2	81.58	-		
D.O. (mg/L)	5.7	5.7	5.5	5.4	5.3	5.3	5.48	5.29		
Turbidity (NTU)	4.7	4.7	4.8	5.0	5.9	5.8	5.15	-		
SS (mg/L)	5.0 5.0 6.0 5.0 8.0 6.0						5.83	-		
Remarks		No dredging works was observed.								

Station			IM	02			Co-ordinate	s
Time (hh:mm)			18:28	-18:31			Northing	Easting
Water Depth (m)			14	1.4			22.21.651	113.55.897
Monitoring Depth (m)	1	.0	7					
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	29.3	29.4	28.9	29.1	28.7	28.7	29.02	-
Salinity (ppt)	30.4	30.3	31.3	30.8	31.6	31.7	31.01	-
pH	8.2	8.1	8.1	8.1	8.0	8.0	8.10	
D.O. Saturation (%)	75.7	76.1	69.0	72.1	70.3	66.6	71.63	-
D.O. (mg/L)	5.1	5.1	4.7	4.9	4.8	4.5	4.83	4.63
Turbidity (NTU)	7.8	7.8	8.7	8.5	8.8	9.1	8.45	-
SS (mg/L)	6.0	5.0	7.0	6.0	6.00	-		
Remarks	No dredging works was observed.							

Station			MF	PB1					
Time (hh:mm)			17:47	-17:49					
Water Depth (m)			8						
Monitoring Depth (m)	1	.0							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	30.9	30.7	30.0	30.2	29.7	29.5	30.14	-	
Salinity (ppt)	20.9	21.7	25.6	24.3	27.5	28.8	24.81	-	
pH	7.8	7.8	7.9	7.9	7.9	7.9	7.89		
D.O. Saturation (%)	79.3	78.9	73.6	74.0	72.6	72.6	75.17	-	
D.O. (mg/L)	5.4	5.4	5.0	5.1	4.9	4.9	5.13	4.92	
Turbidity (NTU)	6.3	6.2	8.5	8.6	8.9	9.0	7.92	-	
SS (mg/L)	5.0	6.0	5.0	5.67	-				
Remarks		No dredging works was observed.							

Station			MF	PB2					
Time (hh:mm)			17:37	-17:39					
Water Depth (m)			8						
Monitoring Depth (m)	1	.0							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	30.9	30.9	29.9	29.9	29.8	29.8	30.21	-	
Salinity (ppt)	20.1	20.0	25.4	25.7	26.6	26.5	24.04	-	
pH	7.9	7.9	8.0	8.0	8.0	7.9	7.91		
D.O. Saturation (%)	80.5	79.2	74.5	73.9	75.5	74.5	76.35	-	
D.O. (mg/L)	5.5	5.5	5.1	5.0	5.1	5.1	5.22	5.10	
Turbidity (NTU)	6.6	6.5	5.8	6.1	5.4	5.6	6.00	-	
SS (mg/L)	7.0	5.0	5.67	-					
Remarks		No dredging works was observed.							

Station			IV	IP						
Time (hh:mm)			18:05	-18:06						
Water Depth (m)			5							
Monitoring Depth (m)	1.	.0	2							
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom		
Water Temperature (°C)	30.5	30.7	-	-	29.8	29.8	30.21	-		
Salinity (ppt)	21.8	21.1	-	-	26.2	26.2	23.81	-		
pH	7.8	7.8	-	-	7.9	7.9	7.85			
D.O. Saturation (%)	78.2	78.9	-	-	76.7	75.9	77.43	-		
D.O. (mg/L)	5.4	5.4	-	-	5.2	5.2	5.30	5.20		
Turbidity (NTU)	6.4	6.7	-	7.35	-					
SS (mg/L)	5.0	5.0 6.0 8.0 6.0 6.25 -								
Remarks	No dredging works was observed.									

Compliance with Action an	d Limit Lev	<u>el</u>												
Parameter	As in	EM&A	Mean(C1-	-C3)*130%	IM	101	IMO2			MPB1		MPB2		IP.
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	5.0	5.0	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.2	5.2	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	7.7	7.7	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	9.3	9.3	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/30/08
Weather & Ambient Temperature	Sunny, 31C

Station			C2 (	NM5)			1				
Time (hh:mm)			14:07	-14:09							
Water Depth (m)											
Monitoring Depth (m)	1	.0	3.0								
Trial	Trial 1	Trial 2	Depth- averaged	Bottom							
Water Temperature (°C)	29.6	29.7	29.4	29.3	28.4	28.3	29.12	-			
Salinity (ppt)	27.7	27.6	27.8	27.8	29.9	30.1	28.49	-			
pH	8.0	7.9	7.9	7.9	7.8	7.8	7.88				
D.O. Saturation (%)	85.6	83.8	79.1	75.7	68.8	72.0	77.50	-			
D.O. (mg/L)	5.7	5.6	5.3	5.1	4.6	4.8	5.18	4.73			
Turbidity (NTU)	6.5	6.5	7.3	7.2	10.3	10.5	8.05	-			
SS (mg/L)	12.0	12.0 11.0 12.0 12.0 11.0 12.0 1									
Remarks			No	dredging wo	orks was obs	served.					

Station			IM	01			Co-ore	dinates
Time (hh:mm)			12:56	-12:58			Northing	Easting
Water Depth (m)				22.21.892	113.55.213			
Monitoring Depth (m)	1	.0						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom
							averaged	
Water Temperature (°C)	29.6	29.6	29.1	29.2	29.1	28.8	29.22	-
Salinity (ppt)	26.9	27.0	28.5	28.4	28.6	29.0	28.07	-
pH	7.8	7.8	7.8	7.8	7.8	7.8	7.81	
D.O. Saturation (%)	83.0	82.1	77.2	79.3	77.2	74.1	78.82	-
D.O. (mg/L)	5.6	5.5	5.2	5.3	5.2	4.96	5.27	5.06
Turbidity (NTU)	6.8	6.9	7.2	7.3	7.8	8.0	7.33	-
SS (mg/L)	17.0	16.0	17.0	16.17	-			
Remarks			No	dredging wo	orks was obs	served.		

Station			IM	02			Co-ord	dinates			
Time (hh:mm)			12:45	-12:48			Northing	Easting			
Water Depth (m)				22.21.651	113.55.899						
Monitoring Depth (m)	1	.0									
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-	Bottom			
							averaged				
Water Temperature (°C)	29.0	29.0	28.8	28.4	28.3	28.3	28.62	-			
Salinity (ppt)	28.9	28.9	29.2	29.9	30.2	30.2	29.57	-			
pH	7.9	7.9	7.9	7.9	7.9	7.8	7.87				
D.O. Saturation (%)	73.5	74.3	71.2	66.9	66.3	65.8	69.67	-			
D.O. (mg/L)	4.9	5.0	4.8	4.5	4.5	4.41	4.66	4.43			
Turbidity (NTU)	9.0	9.0	10.8	11.0	13.9	13.8	11.25	-			
SS (mg/L)	14.0	13.0	13.0	12.17	-						
Remarks		No dredging works was observed.									

Station			MF	PB1							
Time (hh:mm)			13:37	-13:40							
Water Depth (m)											
Monitoring Depth (m)	1	.0	4	.4	7	.8					
Trial	Trial 1	Trial 2	Trial 2	Depth- averaged	Bottom						
Water Temperature (°C)	30.3	30.1	29.5	29.5	29.1	29.1	29.60	-			
Salinity (ppt)	19.3	20.0	23.6	23.5	26.5	26.4	23.22	-			
pH	7.6	7.6	7.7	7.7	7.7	7.7	7.63				
D.O. Saturation (%)	77.5	75.1	71.6	71.4	69.5	70.8	72.65	-			
D.O. (mg/L)	5.3	5.1	4.9	4.9	4.7	4.8	4.94	4.73			
Turbidity (NTU)	8.7	8.4	9.7	9.6	10.5	10.4	9.55	-			
SS (mg/L)	21.0	20.0	21.0	24.0	17.0	19.0	20.33	-			
Remarks		No dredging works was observed.									

Station			MI	PB2						
Time (hh:mm)			13:27	-13:29						
Water Depth (m)										
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)	30.0	30.3	29.4	29.5	29.3	29.3	29.62	-		
Salinity (ppt)	19.6	19.1	24.9	23.9	25.9	25.4	23.12	-		
pH	7.6	7.6	7.7	7.7	7.7	7.7	7.65			
D.O. Saturation (%)	77.4	77.0	72.0	72.1	72.5	73.5	74.08	-		
D.O. (mg/L)	5.3	5.3	4.9	4.9	4.9	5.0	5.04	4.93		
Turbidity (NTU)	8.1	8.2	7.9	7.8	7.7	7.7	7.90	-		
SS (mg/L)	17.0	16.0	18.0	18.0	21.0	18.0	18.00	-		
Remarks	No dredging works was observed.									

Station		•	N	/IP	•		1					
Time (hh:mm)			13:54	-13:56								
Water Depth (m)												
Monitoring Depth (m)	1	.0	2	.9	4	.7						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth- Bo	Bottom				
Water Temperature (°C)	30.1	30.0	-	-	29.3	29.5	29.74	-				
Salinity (ppt)	20.8	19.3	-	-	24.6	25.0	22.43	-				
pH	7.5	7.5	-	-	7.6	7.5	7.54					
D.O. Saturation (%)	77.4	77.0	-	-	73.8	78.2	76.60	-				
D.O. (mg/L)	5.3	5.3	-	-	5.0	5.3	5.21	5.14				
Turbidity (NTU)	8.2	8.1	-	-	8.8	9.0	8.53	-				
SS (mg/L)	4.6	4.8	-	-	15.0	18.0	10.61	-				
Remarks		No dredging works was observed.										

Compliance with Action at	ia Limit Lev	<u>/ei</u>												
Parameter	As in	EM&A	C2*1	130% IMO1		IM	02		MPB1	MF	PB2	MP		
	Action	Limit	Action	Limit	Exceedan Exceedan		Exceedanc	Exceedanc	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	e of Action	e of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level	Level	Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.7	4.7	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.2	5.2	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	10.5	10.5	N	N	N	N	N	N	Ν	N	N	N
SS (Depth-averaged)	24.0	37.0	15.2	15.2	N	N	N	N	N	N	N	N	N	N

Sampling Date	09/30/08
Weather & Ambient Temperature	Fine, 30C

Station			C1 (	NM3)							
Time (hh:mm)			20:54	-20:57							
Water Depth (m)											
Monitoring Depth (m)	1	.0	7								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	29.9	29.9	29.7	29.6	28.6	28.7	29.39	-			
Salinity (ppt)	27.5	27.6	27.7	27.7	30.0	29.5	28.35	-			
pH	7.9	7.9	7.9	7.9	7.8	7.8	7.85				
D.O. Saturation (%)	83.3	85.0	75.0	75.0	69.5	71.6	76.57	-			
D.O. (mg/L)	5.6	5.7	5.0	5.0	4.7	4.8	5.11	4.73			
Turbidity (NTU)	6.6	6.5	7.1	7.2	9.4	9.4	7.70	-			
SS (mg/L)	15.0	14.0	15.0	13.0	13.0	13.0	13.83	-			
Remarks		No dredging works was observed.									

Station			C3 (	NM6)							
Time (hh:mm)			19:30	-19:32							
Water Depth (m)			6								
Monitoring Depth (m)	1	.0	3								
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom			
Water Temperature (°C)	30.6	30.5	29.7	29.7	29.6	29.6	29.92	-			
Salinity (ppt)	18.9	19.1	24.3	24.3	24.7	24.8	22.67	-			
pH	7.6	7.6	7.7	7.64							
D.O. Saturation (%)	77.1	76.8	71.6	72.0	72.3	71.7	73.58	-			
D.O. (mg/L)	5.3	5.3	4.9	4.9	4.9	4.9	5.01	4.88			
Turbidity (NTU)	7.9	7.7	7.8	7.82	-						
SS (mg/L)	10.0	8.0	10.0	8.0	9.17	-					
Remarks		No dredging works was observed.									

Station			IM	01			Co-ordinate	s		
Time (hh:mm)			20:31	-20:33			Northing	Easting		
Water Depth (m)			16	6.6			22.21.893	113.55.214		
Monitoring Depth (m)	1	.0	8	5.6						
Trial	Trial 1	Trial 1 Trial 2 Trial 1 Trial 2 Trial 1 Trial 2					Depth-averaged	Bottom		
Water Temperature (°C)	29.9	29.8	29.5	29.4	29.2	29.1	29.49	-		
Salinity (ppt)	26.7	27.0	28.0	28.1	28.6	28.9	27.86	-		
pH	7.8	7.8	7.9	7.9	7.9	7.8	7.84			
D.O. Saturation (%)	82.9	82.5	79.1	78.2	76.6	75.8	79.18	-		
D.O. (mg/L)	5.5	5.5	5.3	5.2	5.1	5.1	5.29	5.10		
Turbidity (NTU)	6.8 6.8 6.9 7.1 7.8 7.7						7.18	-		
SS (mg/L)	14.0	14.0	16.0	14.0	14.67	-				
Remarks		No dredging works was observed.								

Station			IM	02			Co-ordinate	s	
Time (hh:mm)			20:41	-20:44			Northing	Easting	
Water Depth (m)			14	4.2			22.21.651	113.55.897	
Monitoring Depth (m)	1	.0	7						
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	29.1	29.1	28.6	28.9	28.4	28.4	28.75	-	
Salinity (ppt)	29.1	29.0	29.9	29.4	30.3	30.3	29.68	-	
pH	7.9	7.9	7.9	7.9	7.7	7.8	7.84		
D.O. Saturation (%)	73.3	73.7	66.6	69.7	67.9	64.2	69.23	-	
D.O. (mg/L)	4.9	4.9	4.5	4.7	4.6	4.3	4.64	4.44	
Turbidity (NTU)	9.2	9.2	10.4	10.2	13.7	13.9	11.10	-	
SS (mg/L)	12.0	15.0	13.0	13.0	13.00	-			
Remarks	No dredging works was observed.								

Station										
Time (hh:mm)										
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)	30.6	30.4	29.7	29.9	29.4	29.2	29.87	-		
Salinity (ppt)	19.6	20.4	24.3	23.0	26.2	27.5	23.48	-		
pH	7.6	7.6	7.6	7.6	7.7	7.7	7.63			
D.O. Saturation (%)	76.9	76.5	71.2	71.6	70.2	70.2	72.77	-		
D.O. (mg/L)	5.3	5.2	4.8	4.9	4.7	4.7	4.94	4.73		
Turbidity (NTU)	8.1	8.0	9.7	9.8	10.2	10.3	9.35	-		
SS (mg/L)	12.0	13.0	14.0	14.0	15.0	17.0	14.17	-		
Remarks	No dredging works was observed.									

Station			M	PB2							
Time (hh:mm)											
Water Depth (m)											
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)	30.6	30.7	29.7	29.6	29.5	29.5	29.94	-			
Salinity (ppt)	18.8	18.7	24.0	24.3	25.3	25.2	22.71	-			
pH	7.6	7.6	7.7	7.7	7.7	7.7	7.65				
D.O. Saturation (%)	78.1	76.8	72.1	71.5	73.1	72.1	73.95	-			
D.O. (mg/L)	5.4	5.3	4.9	4.8	4.9	4.9	5.03	4.91			
Turbidity (NTU)	8.3	8.2	7.7	7.9	7.4	7.5	7.83	-			
SS (mg/L)	13.0	12.0	12.0	13.0	16.0	16.0	13.67	-			
Remarks		No dredging works was observed.									

Station			IV	IP						
Time (hh:mm)										
Water Depth (m)	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)	30.3	30.4	-	-	29.6	29.5	29.94	-		
Salinity (ppt)	20.4	19.7	-	-	24.9	24.8	22.48	-		
pH	7.5	7.5	-	-	7.7	7.7	7.59			
D.O. Saturation (%)	75.8	76.5	-	-	74.3	73.5	75.03	-		
D.O. (mg/L)	5.2	5.2	-	-	5.0	5.0	5.11	5.01		
Turbidity (NTU)	8.1	8.4	-	-	9.4	9.5	8.85	-		
SS (mg/L)	15.0	15.0	-	-	16.0	14.0	15.00	-		
Remarks		No dredging works was observed.								

Compliance with Action an	<u>d Limit Lev</u>	el												
Parameter	As in	EM&A	Mean(C1+C3)*130%		Mean(C1+C3)*130% IMO1		IMO2		MPB1		MPB2		IV	/IP
	Action	Limit	Action	Limit	Exceedan	Exceedan	Exceedance of Action	Exceedance	Exceedanc	Exceedance of Limit Level	Exceedan	Exceedan	Exceedan	Exceedan
	Level	Level	Level	Level	ce of	ce of Limit	Level	of Limit	e of Action		ce of	ce of Limit	ce of	ce of Limit
					Action	Level		Level	Level		Action	Level	Action	Level
DO (Bottom)	3.3	2.5	4.8	4.8	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	4.2	4.0	5.1	5.1	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	29.0	49.0	10.1	10.1	N	N	N	N	N	N	Z	N	N	N
SS (Depth-averaged)	24.0	37.0	15.0	15.0	N	N	N	N	N	N	N	N	N	N

## Annex H

Monitoring Results and QA/QC Reports of Laboratory Testing for POPs

# ALS Technichem (HK) Pty Ltd

## **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



## **CERTIFICATE OF ANALYSIS**

Client : ERM HONG KONG Laboratory : ALS Technichem (HK) Pty Ltd Page : 1 of 7

Contact : MS KAREN LUI : Wong Wai Man, Alice : Wong Wai Man, Alice : HK0813891

: 21/F, LINCOLN HOUSE, 979 KING'S ROAD,

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Telephone : +852 2271 3000 Telephone : +852 2610 1044
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Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number : ---- Date Samples Received : 03-SEP-2008

FACILITY

Order number : ---- Issue Date : 25-SEP-2008

C-O-C number : --- No. of samples received : 18
Site : --- No. of samples analysed : 18

#### General Comments

Address

E-mail

This report supersedes any previous report(s) with this reference. Results apply to the 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 processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client. The completion date of analysis is:

10-SEP-2008

Key: LOR = Limit of reporting; CAS Number = Chemistry Abstract Services number

Specific comments for Work Order: HK0813891

Sample(s) were collected by ALS Technichem (HK) staff on 03 September, 2008.

Water sample(s) analysed and reported on an as received basis.

This report may not be reproduced except with prior written approval from the testing laboratory.

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 Hong Kong, Chapter 553, Section 6.

 Signatories
 Position
 Authorised results for

 Anh Ngoc Huynh
 Senior Chemist
 Organics

ALS Laboratory Group
Trading Name: ALS Technichem (HK) Pty Ltd

Page Number : 2 of 7

Client : ERM HONG KONG

Work Order HK0813891



## Analytical Results

Sub-Matrix: MARINE WATER		Clie	ent sample ID	<b>MPB1 ME</b> [03-SEP-2008]	MPB1 ME DUP	MPB2 ME	MPB2 ME DUP	MP ME [03-SEP-2008]	
	Cli	ent samplii	ng date / time		[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]		
Compound	CAS Number	LOR	Unit	HK0813891-001	HK0813891-002	HK0813891-003	HK0813891-004	HK0813891-005	
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP-065B: Organochlorine Pesticides	'								
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01	
EP-065S: PCB Congeners and Organoo	chlorine Pesticides Surrog	ate	'				Surrogate control lim	its listed at end of this re	
Decachlorobiphenyl	2051-24-3	0.1	%	71.4	84.0	63.6	80.3	76.0	

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Client : ERM HONG KONG



Sub-Matrix: MARINE WATER		Clien	t sample ID	MP ME DUP	C2 (NM5) ME	C2 (NM5) ME DUP	MPB1 MF	MPB1 MF DUP
	Clie	ent sampling	g date / time	[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]
Compound	CAS Number	LOR	Unit	HK0813891-006	HK0813891-007	HK0813891-008	HK0813891-009	HK0813891-010
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides					'			,
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organo	chlorine Pesticides Surrog	ate					Surrogate control lir	nits listed at end of this report
Decachlorobiphenyl	2051-24-3	0.1	%	74.1	72.2	69.8	102	57.5

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Client : ERM HONG KONG



Sub-Matrix: MARINE WATER		Clie	nt sample ID	MPB2 MF	MPB2 MF DUP	MP MF	MP MF DUP	C1 (NM3) MF
	Clie	ent samplin	ng date / time	[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]
Compound	CAS Number	LOR	Unit	HK0813891-011	HK0813891-012	HK0813891-013	HK0813891-014	HK0813891-015
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides		·						
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organo	ochlorine Pesticides Surrog	ate				'	Surrogate control lin	nits listed at end of this report
Decachlorobiphenyl	2051-24-3	0.1	%	63.2	59.0	73.4	64.4	60.1
<u> </u>								

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Client : ERM HONG KONG



Sub-Matrix: MARINE WATER			nt sample ID	C1 (NM3) MF DUP	C3 (NM6) MF	C3 (NM6) MF DUP		
	Cli	ent samplir	ng date / time	[03-SEP-2008]	[03-SEP-2008]	[03-SEP-2008]		
Compound	CAS Number	LOR	Unit	HK0813891-016	HK0813891-017	HK0813891-018		
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01		
EP-065B: Organochlorine Pesticides	<u>'</u>						. '	
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01		
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01		
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01		
EP-065S: PCB Congeners and Organo	chlorine Pesticides Surrog	ate					Surrogate control limits lis	sted at end of this report
Decachlorobiphenyl	2051-24-3	0.1	%	57.1	51.5	60.1		

Page Number : 6 of 7

Client : ERM HONG KONG

Work Order HK0813891



#### Laboratory Duplicate (DUP) Report

latrix: WATER					La	boratory Duplicate (DUP)	Report	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
P-065A: PCB Sing	le Congeners (QC Lot:	749667)						
HK0813891-001	gle Congeners (QC Lot: 749667)  MPB1 ME  PC	PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	0.0
		PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	0.0
		PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	0.0
		PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	0.0
		PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	0.0
		PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	0.0
		PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	0.0
		PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	0.0
		PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	0.0
		PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	0.0
		PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	0.0
		PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	0.0
		PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	0.0
		PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	0.0
		PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	0.0
		PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	0.0
		PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	0.0
P-065B: Organoch	lorine Pesticides (QC I	Lot: 749667)	·					
HK0813891-001	MPB1 ME	4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	0.0
		4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	0.0
		4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	0.0

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Re	covery (%)	Recovery	Limits (%)	RF	PD (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentratio	LCS	DCS	Low	High	Value	Control Limit
EP-065A: PCB Single Congeners (Q	C Lot: 749667)				n						
PCB 8	34883-43-7	0.01	μg/L	<0.01	100 μg/L	77.5		50	130		
PCB 18	37680-65-2	0.01	μg/L	<0.01	100 μg/L	88.4		50	130		
PCB 28	7012-37-5	0.01	μg/L	<0.01	100 μg/L	104		50	130		
PCB 52	35693-99-3	0.01	μg/L	<0.01	100 μg/L	110		50	130		
PCB 44	41464-39-5	0.01	μg/L	<0.01	100 μg/L	110		50	130		
PCB 66	32598-10-0	0.01	μg/L	<0.01	100 μg/L	109		50	130		
PCB 101	37680-73-2	0.01	μg/L	<0.01	100 μg/L	109		50	130		

Page Number :

Client

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: ERM HONG KONG

Work Order HK0813891



Matrix: WATER			Method Blank (MB)	) Report		Laboratory Control Sp	ike (LCS) and Lai	boratory Control	Spike Duplicate	e (DCS) Report	
					Spike	Spike Reco	very (%)	Recovery	Limits (%)	R	PD (%)
Method: Compound	CAS Number	LOR	Unit	Result	Concentratio	LCS	DCS	Low	High	Value	Control Limit
EP-065A: PCB Single Congeners	(QC Lot: 749667) - Continue	ed	·		n	· · · · · · · · · · · · · · · · · · ·					
PCB 77	32598-13-3	0.01	μg/L	<0.01	100 μg/L	97.4		50	130		
PCB 149	38380-04-0	0.01	μg/L	<0.01	100 μg/L	97.5		50	130		
PCB 118	31508-00-6	0.01	μg/L	<0.01	100 μg/L	99.6		50	130		
PCB 153	35065-27-1	0.01	μg/L	<0.01	100 μg/L	110		50	130		
PCB 105	32598-14-4	0.01	μg/L	<0.01	100 μg/L	96.9		50	130		
PCB 138	35065-28-2	0.01	μg/L	<0.01	100 μg/L	# 154		50	130		
PCB 126	57465-28-8	0.01	μg/L	<0.01	100 μg/L	112		50	130		
PCB 187	52663-68-0	0.01	μg/L	<0.01	100 μg/L	84.3		50	130		
PCB 128	38380-07-3	0.01	μg/L	<0.01	100 μg/L	98.4		50	130		
PCB 156	38380-08-4	0.01	μg/L	<0.01	100 μg/L	94.1		50	130		
PCB 180	35065-29-3	0.01	μg/L	<0.01	100 μg/L	93.8		50	130		
PCB 169	60044-26-0	0.01	μg/L	<0.01	100 μg/L	96.6		50	130		
PCB 170	35065-30-6	0.01	μg/L	<0.01	100 μg/L	96.8		50	130		
PCB 195	52663-78-2	0.01	μg/L	<0.01	100 μg/L	96.3		50	130		
EP-065B: Organochlorine Pestic	ides (QC Lot: 749667)										
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	100 μg/L	# Not Determined		50	130		
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	100 μg/L	# Not Determined		50	130		
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	100 μg/L	# Not Determined		50	130		

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

• No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

#### **Surrogate Control Limits**

Sub-Matrix: MARINE WATER		Recovery	Limits (%)
Compound	CAS Number	Low	High
EP-065S: PCB Congeners and Organoch	lorine Pesticides Surrogate		
Decachlorobiphenyl	2051-24-3	50	130

# ALS Laboratory Group ANALYTICAL CHEMISTRY & TESTING SERVICES

## ALS TECHNICHEM (HK) Pty Ltd

**Environmental Division** 

CONTACT: MS KAREN LUI

CLIENT:

## CERTIFICATE OF ANALYSIS

ADDRESS: 21/F, LINCOLN HOUSE, 979 KING'S ROAD,

**ERM HONG KONG** 

TAIKOO PLACE, ISLAND EAST, QUARRY BAY, HONG KONG

PROJECT: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

Batch: LABORATORY: DATE RECEIVED:

DATE OF ISSUE:

HK0813891 HONG KONG 03/09/2008 25/09/2008

SAMPLE TYPE: WATER 18

No. of SAMPLES:

#### COMMENTS

Sample(s) were collected by ALS Technichem (HK) staff on 03 September, 2008.

Water sample(s) analysed and reported on an as received basis.

PAHs were subcontracted and tested by ALS Sydney.

ALS Sydney details report was attached. The attached report contains a total of 16 pages.

#### Sample Details

ALS Lab ID	Sample ID	Date of Sampling
HK0813891 - 1	MPB1-ME	03/09/2008
HK0813891 - 2	MPB1-ME DUP	03/09/2008
HK0813891 - 3	MPB2-ME	03/09/2008
HK0813891 - 4	MPB2-ME DUP	03/09/2008
HK0813891 - 5	MP-ME	03/09/2008
HK0813891 - 6	MP-ME DUP	03/09/2008
HK0813891 - 7	C2 (NM5)-ME	03/09/2008
HK0813891 - 8	C2 (NM5)-ME DUP	03/09/2008
HK0813891 - 9	MPB1-MF	03/09/2008
HK0813891 - 10	MPB1-MF DUP	03/09/2008
HK0813891 - 11	MPB2-MF	03/09/2008
HK0813891 - 12	MPB2-MF DUP	03/09/2008
HK0813891 - 13	MP-MF	03/09/2008
HK0813891 - 14	MP-MF DUP	03/09/2008
HK0813891 - 15	C1 (NM3)-MF	03/09/2008
HK0813891 - 16	C1 (NM3)-MF DUP	03/09/2008
HK0813891 - 17	C3 (NM6)-MF	03/09/2008
HK0813891 - 18	C3 (NM6)-MF DUP	03/09/2008

#### **ISSUING LABORATORY: HONG KONG**

Address

ALS Technichem (HK) Pty Ltd 11/F Chung Shun Knitting Centre

1-3 Wing Yip Street Kwai Chung

HONG KONG

Brisbane

Sydney

Melbourne

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Phone: Fax: Email:

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hongkong@alsenviro.com

Ms Woing Wai Man Alice

Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

Bogor

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**AUSTRALIA** 

**AMERICAS** 

Hong Kong Singapore Kuala Lumpur Vancouver Santiago Amtofagasta Lima

Abbreviations: % SPK REC denotes percentage spike recovery

CHK denotes duplicate check sample LOR denotes limit of reporting

ALS Technichem IHKI Ptu LtBS % REC denotes Laboratory Control Sample percentage recovery

Part of the ALS Laboratory Group 11/F, Chung Shun Knitting Centre, 1-3 Wing Yip Street, Kwai Chung, N.T., H.K. Phone: 852-2610 1044 Fax: 852-2610 2021 www.alsenviro.com

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#### **Environmental Division**

#### CERTIFICATE OF ANALYSIS

Work Order : **ES0813042** Page : 1 of 8

Amendment : 1

Client : ALS TECHNICHEM (HK) Laboratory : Environmental Division Sydney

Contact : MS ALICE WONG Contact : Charlie Pierce

Address : 11/F CHUNG SHUN KNITTING CNTR Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG

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Telephone : +852 001185226101044 Telephone : +61-2-8784 8555
Facsimile : +852 26102021 Facsimile : +61-2-8784 8500

Project : ---- QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Order number : ---C-O-C number : ---Date Samples Received : 08-SEP-2008

Sampler : --- Issue Date : 24-SEP-2008
Site : ---

Quote number : SY/241/07 No. of samples received : 18

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



ACCREDITATION

NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories Position Accreditation Category

Alex Rossi Organic Chemist Organics

Accredited for compliance with ISO/IEC 17025.

Page : 3 of 8

Work Order ES0813042 Amendment 1
Client : ALS TECHNICHEM (HK)

Project ; --

# ALS

#### General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been preformed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insuffient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

Key: CAS Number = Chemistry Abstract Services number

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

Work Order

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Ckent Project : ALS TECHNICHEM (HK)

Sub-Matrix: <b>WATER</b>		23%	hel samulti ID	HK0813891-1 MPB1-ME	HK0813891-2 MPB1-ME DUP	HK0813891-3 MPB2-ME	HK0813891-4 MPB2-ME_DUP	HK0813891-5 MP-ME	
	(20)	ett sarrani	vg datu limo	03-SEP-2008 15:00	03-SEP-2008 15:00	03-SEP-2008 15:00	03-SEP-2008 15:00	03-SEP-2008 15:00	
Compound	CAS Number	LOR	Dest	ES0813042-001	ES0813042-002	ES0813042-003	ES0813042-004	ES0813042-005	
EP132B: Polynuclear Aromatic Hydr	ocarbons								
3-Methylcholanthrene	56-49-5	0.1	μg/L .	<0.1	<0.1	<0.1	<0.1	<0.1	
2-Methylnaphthalene	91-57-6	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	· <0.1	
Acenaphthene	83-32-9	0.1	μg/L .	<0.1	<0.1	<0.1	<0.1	<0.1	
Acenaphthylene	208-96-8	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Anthracene	120-12	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(a)pyrene	50-32-8	0.05	μg/L	<0.05	40:05	<0.05	<0.05	<0.05	
Benzo(b)fluoranthene	205-99-2	0.1	μg/L	, ≤Ū.1	<0.1	<0.1	<0.1	≤0.1	
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(k)fluoranthene	207-08-9	0.1	µg/∟	<0.1	<0.1	<0.1	<0.1	<0.1	
Chrysene	218-01-9	0.1	ug/L	<0.1	<0.1	<0.1	<0.1	< 0.1	
Coronene	191-07-1	0.1	μg/L :	<0.1	<0.1	<0.1	<0.1	< 0.1	
Dibenz(a.h)anthracene	53-70-3	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Fluoranthene	206-44-0	0.1	μg/L .	<0.1	<0.1	<0.1	<0.1	<0.1	
Fluorene	86-73-7	0.1	µg/	<0.1	<0.1	<0.1	<0.1	<0.1	
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	$\mu_0/L$	<0.1	<0.1	<0.1	<0.1	<0.1	
N-2-Fluorenyl Acetamide	53-96-3	0.1	Hart	< 0.1	<0.1	<0.1	<0.1	<0.1	
Naphthalene	91-20-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Perylene	198-55-0	0.1	ug/L	< 0.1	<0.1	<0.1	<0.1	<0.1	
Phenanthrene	85 01-8	0.1	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Pyrene	129-00-0	0.1	pgA;	₹0.1 <sub>1</sub>	<0.1	<0.1	<0.1	≤0.1	
EP132T: Base/Neutral Extractable S	urrogates								
2-Fluorobiphenyl	321 60 8	0.	% :	86.5	84.3	86.5	85.9	94.7	
Anthracene-d10	1719 06-8	0.1	%	96.3	93.6	95.8	98.6	106	
4-Terphenyl-d14	1718-51-0	0.1	%	97.5	92.9	94.4	96.7	106	

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Work Order

ES0813042 Amendment 1

Chien1 Project : ALS TECHNICHEM (HK)

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Sub-Mairie: WATER		\$300	est sample:IE7	HK0813891-6	HK0813891-7	HK0813891-8	HK0813891-9	HK0813891-10
	-XCN8	m) sample	ig däte/ lime	MP-ME DUP 03-SEP-2008 15:00	C2(NM5)-ME 03-SEP-2008 15:00	C2(NM5)-ME DUP 03-SEP-2008 15:00	MPB1-MF 03-SEP-2008 15:00	MPB1-MF DUP 03-SEP-2008 15:0
Compayed	CAS Number	(LDR	Line	ES0813042-006	ES0813042-007	ES0813042-008	ES0813042-009	ES0813042-010
EP132B: Polynuclear Aromatic Hyd	rocarbons							
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
7.12-Dimethylbenz(a)anthracene	57-97-5	0.7	μg/Ĺ	<0.1	<0.1	<0.1	<0.1	<0,1
Acenaphthene	83-32-9	0.7	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-8	0.4	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	< 0.1
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	< 0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	#g/L	< 0.05	< 0.05	<0.05	·40.05	< 0.05
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	< 0.1	< 0.1	<0.1	<0.1	< 0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L	50.1	<0.1	≉G.1	<0.1	<0.1
Benzo(g.h.i)perylene	191-24-2	0.1	J/g/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	ug/L	<0.1	<0.1	<0.1	<0.1	< 0.1
Chrysene	218-01-9	0.1	µg/L	<0.1	<(1 !	<0.1	<0.1	< 0.1
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<001	<0.1	< 0.1
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	< 0.1	<0.7	<0.1	¥0.1	< 0.1
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L	< 0.1	50.1	50.1	FD.1	< 0.1
ndeno(1.2.3.cd)pyrene	193-39-5	0.7	μg/L	< 0.1	<0.1	×0.1	<(1	< 0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	HG/L	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	ug/L	< 0.1	<0.1	<0.1	<0.7	<0.1
Perylene	198-55-0	0.1	µg/L	< 0.1	<0.1	<0.1	<(% 1	<0.1
Phenanthrene	85-01-8	0.1	ug/L	< 0.1	<0.1	<0:1	<() 1	<0.1:
Pyrene	129-50-0	0.1	µg/L	≪0.1	≤0.1	<b>50.1</b>	<0.1	<0.1
EP132T; Base/Neutral Extractable S	iurrogates							
2-Fluoroblphenyl	321-60-8	0.1	%	93.0	88.0	89.6	95.8	105
Anthracene-d10	1719-06-8	0.1	%	103	97.9	98.0	106	107
4-Terphenyl-d14	1718-51-0	0.1	%	103	96.2	98.9	. 108	109

Page Work Order Client

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Project

: ALS TECHNICHEM (HK)

Sub-Matox: WATER	Co		nt sample ID	HK0813891-11 MPB2-MF 03-SEP-2008 15:00	HK0813891-12 MPB2-MF DUP 03-SEP-2008 15:00	HK0813891-13 MP-MF 03-SEP-2008 15:00	HK0813891-15 C1(NM3)-MF 03-SEP-2008 15:00	HK0813891-16 C1(NM3)-MF DUP 03-SEP-2008 15:00
Compound	CAS Number	LOR	zanii	ES0813042-011	ES0813042-012	ES0813042-013	ES0813042-014	ES0813042-015
EP1328: Polynuclear Aromatic Hydr		10.00						
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	μg/L	<0.1	¥0.1	<0.1	<0.1	<0.1
Acenaphthylene	208-96-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benz(a)anthracene	56-55-3	0.1	µg/L	< 0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0,05	µg/L	< 0.05	< 0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	ид/ц	< 0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	< 0.1
Benzo(g.h.i)perylene	191-24-2	0.1	″ µg/L	<0.1	<0.1	<0.1	<0.1	< 0.1
Benzo(k)fluoranthene	207-08-9	0.7	pg/L	< 0.1	<0.1	<0.1	< 0.1	<0.1
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a.h)anthracene	53-70-3	051	µg/L	< 0.1	<0.1	<0.1	<(j;	. ≤D. 1
Fluoranthene	206-44-0	0.1	µg/l₌	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	140/4	0.1	<0.1	≤0.1	<0.1	<0,1
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	k0.1	< 0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/∟	< 0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	HB/L	< 0.1	<0.1	<0.1	<0.1	<0.4
Perylene	198-55-0	0.1	μg/L	<0.1	4.5>	<0.1	<0.1	<0.1
Phonanthrene	85-01-8	0:1	j₃g/L	≤0.	<0.1	<0.1	<0.1	<0.1
Pyrene	129-00-0	0.1	µg/L	<b>≮0.1</b> /	s0.1)	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable S	The same of the sa							
2-Fluorobiphenyl	321-60-8	0.1	%	98.6	88.2	87.5	92.8	96.4
Anthracene-d10	1719-06-8	0.1	_ %	112	97.6	96.6	105	106
4-Terphenyl-d14	1718-51-0	0.1	%	113	96.8	95.6	104	106

Work Order

: 7 of 8 • ES0813042 Amendment 1

Client

: ALS TECHNICHEM (HK)

Project

Sub-Mainx; WATER	CUI		nt samulų ID ig datė / limė	HK0813891-17 C1(NM6)-MF 03-SEP-2008-15:00	HK0813891-18 C1(NM6)-MF DUP 03-SEP-2008 15:00	HK0813891-14 MP-MF DUP 03-SEP-2008 15:00			·
Compound	CAS Number	108	.Unit	ES0813042-016	ES0813042-017	ES0813042-018			
EP132B: Polynuclear Aromatic Hydro									
3-Methylcholanthrene	56-49-5	0.1	jig/L	<0.1	<0.1	<0.1		1	
2-Methylnaphthalene	91-57-6	0.1	μg/L	≤0.1	<0.1	<0.1		10	
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	μg/L	<0.1	mD.1	<0.1			
Acenaphthene	83-32-9	0.1	из/L	<0.1	<0.1	< 0.1			
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1		-	
Anthracene	120-12-7	0.1	µg/L	<0.1	<0.1t	<0.1			
Benz(a)anthracene	56-55-3	0.1	μg/L	<0.1	<0.1	<0.1		-	
Benzo(a)pyrene	50-32-8	0.05	pig/L	< 0.05	<0.05	< 0.05		-	
Benzo(b)fluoranthene	205-99-2	0.1	μg/L	<0.1	<0.1	<0.1		-	
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1			
Benzo(g.h.i)perylene	191-24-2	0.1	μg/L	<0.1	<0.1	<0.1			
Benzo(k)fluoranthene	207-08-9	0.1	μg/L	< 0.1	<0.1	<0.1			
Chrysene	218-01-9	0.1	μg/L	< 0.1	<0.1	<0.1			
Coronene	191-07-1	0.1	μg/L	<0.1	<0.1	<0.1			
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	80.4	<0.j	<0.j	***		
Fluoranthene	206-44-0	0.1	μg/L	<0.1	<q<sub>11</q<sub>	<0.1			
Fluorene	86-73-7	0.1	µg/L	<0.1	×0.1	<0.1	<del></del>	-	
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	+0.1	<0.1	<0.1		12-	
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	<0.1	≤0.1			
Naphthalene	91-20-3	0.1	µg/L	≥0.1	≤0.1	<0.1			
Perylene	198-55-0	0.1	μg/L	<0.1	<0.1	<0.1		i i	
Phenanthrene	85-01-8	0.1	no/F	<0.1	<(), j	<0.1			
Pyrene	129-00-0	0.1	half-	<0.1	<0.1	<0.1			
EP132T: Base/Neutral Extractable Sc	mogales								
2-Fluorobiphenyl	321-69-8	0.1	5%	92.8	87.3	83.2			
Anthracene-d10	1719-06-8	0.1	%	101	99.1	98.4			
4-Terphenyl-d14	1718-51-0	0.1	%	101	97.3	95.9	****		· -

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Work Order

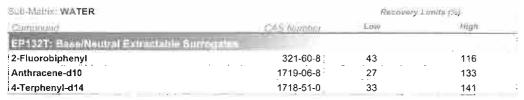
ES0813042 Amendment 1

Client

- ALS TECHNICHEM (HK)

Project : -

#### Surrogate Control Limits









#### **Environmental Division**

#### QUALITY CONTROL REPORT

ES0813042 Work Order Page : 1 of 7

: 1 Amendment

Laboratory : Environmental Division Sydney Client : ALS TECHNICHEM (HK)

: Charlie Pierce Contact : MS ALICE WONG Contact

Address : 277-289 Woodpark Road Smithfield NSW Australia 2164 Address : 11/F CHUNG SHUN KNITTING CNTR

1-3 WING YIP STREET

KWAI CHUNG, N.T HONG KONG HONG KONG

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Telephone : +61-2-8784 8555 Totephone : +852 001185226101044 : +852 26102021 Facsimile : +61-2-8784 8500 Facsimile

Project QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement

carried out in compliance with procedures specified in 21 CFR Part 11.

Site C-O-C number Date Samples Received : 08-SEP-2008

Issue Date Sampler : 24-SEP-2008 Order number

No. of samples received : 18 No. of samples analysed Quote number : SY/241/07 : 18

This report supersedes any provious report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

This document is issued in

accordance with NATA accreditation requirements. Signatories

Signatories

Position

Accreditation Category

Alex Rossi

Organic Chemist

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been

Organics

WORLD RECOGNISED ACCREDITATION

Accredited for compliance with ISO/IEC 17025.

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Work Order ES0813042 Amendment 1
Cilent ALS TECHNICHEM (HK)

Project --



#### General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA. APHA, AS and NEPM, in house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been preformed, results are reported on a dry weight basis,

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficit sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key: Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = Chemistry Abstract Services number

LOR = Limit of reporting

RPD = Relative Percentage Difference

# = Indicates failed QC

1'ag-3 . 3 of 7

Work Order : ES0813042 Amendment 1
Client : ALS TECHNICHEM (HK)

Project : --



#### Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:-No Limit; Result between 10 and 20 times LOR:-0% - 50%; Result > 20 times LOR:-0% - 20%.

• No Laboratory Duplicate (DUP) Results are required to be reported.

No Limit

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Work Order : ES0813042 Amendment 1
Client : ALS TECHNICHEM (HK)

Proper:



#### Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LoS) refers to a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER				Method Blank (MB)		Laboratory Control Spike (LCS) Report			
				Rapport	Spike	Spille Recovery (%)	Recovery	c Elmits (%)	
Method: Commounit	GAS Mulitines	1.00	4mil.	Rosull	Сансализицая	1.03	16890	High:	
P132B: Polynuclear Aromatic Hydrocarbons (C	CLot 752493)								
P132: 3-Methylcholanthrene	56-46-6	0.1	pg/L	<0.1	=:				
		0.10	ag/L		2 µg/L	82.6	65.8	121	
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1					
		0.10	μg/L		2 μg/L	87.4	6F.7	112	
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	μg/L	<0.1			_		
		0.10	μg/L		2 µg/L	77.9	11.6	146	
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1		·			
		0.10	μg/L		2 μg/L	87.2	73.2	111	
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1					
		0.10	µg/L		2 μg/L	89.0	72.4	112	
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1		<del></del>			
		0.10	μg/L		2 μg/L	86.7	73.4	113	
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1					
, ,		0.10	· μg/L		2 μg/L	88.3	73.8	114	
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	85.0	75.2	117	
EP132: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1					
		0.10	µg/L		2 μg/L	88.2	71.4	119	
EP132: Benzo(e)pyrene	192-97-2	0.1	μg/L	<0.1					
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		0.10	µg/L		2 μg/L	84.2	75.3	118	
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	μg/L	<0.1		<u> </u>			
		0.10	μg/L		2 μg/L	82.9	66.6	121	
EP132: Benzo(k)fluoranthene	207-08-9	0.1	μg/L	<0.1			-		
		0.10	μg/L		2 µg/L	92.6	74.8	118	
EP132: Chrysene	2/18-01-9	0.1	μg/L	<0.1			-		
		0.10	μg/L		2 μg/L	84.6	69.6	1:26	
EP132: Coronene	191-07-1	0.1	μg/L	<0.1					
and the state of t		0.10	μg/L	****	2 μg/l.	76.2	47.4	11.53	
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	μg/L	<0.1					
21 102. 0.001.2(0.11)01.1111.00010		0.10	μg/L		2 μg/L	83.6	71.5	117	
EP132; Fluoranthene	206-44-0	0.1	μg/L	<0.1					
ar ion i ionalitica		0.10	μg/L		2 μg/L	89.4	74.8	117	
EP132: Fluorene	86-73-7	0.1	μg/L	<0.1		- 1		·	
E. TOE. TIGOSOFIC		0.10	μg/L		2 μg/L	88.3	72.9	114	
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	μg/L	<0.1					
Er 192. Indono(1.2.9.00)pyrane	.00 00 0	0.10	μg/L		2 µg·t	83.4	67.8	119	

Werk Order

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Client Project ALS TECHNICHEM (HK)



HID WATER				Minmad Blank (MB) Roport	2,011,02	Laboratory Comrol Spike (LCS) Heport		
	gastanar ener	0.0000	10 mcasa		Spike	Spike History Per		Crimina DA
Method' Compauna	CAS Number	108	Africa	Result	Consentration	1.03	1.00	Hig
EP1328: Polynuclear Aromatic Hydrocarbons (O								
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	μg/L ·	<0.1				
		0.10	μg/L		20 µg/L	71.0	53.6	131
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1				
	* ***	0.10	μg/L	· ·	2 μg/L	94.5	68.3	116
EP132: Perylene	198-55-0	0.1	μg/L	<0.1				
t an mark to a south A.S. an Arts		0.10	μg/L	. / /	2 μg/L	83.3	68	. 122
EP132: Phenanthrene	85-01-8	0.1	μg/L	<0.1		:		
<u></u>		0.10	μg/L		2 μg/L	88.4	74.8	. 112
EP132: Pyrene	129-00 0	0.1	μg/L	<0.1				
		:0:10	ид/L		Z-µg/L	90.7	75.1	117
P132B: Polynuclear Aromatic Hydrocarbans (O	(CLot: 759512)							
EP132: 3-Methylcholanthrene	56-49-5	0.1	μg/L	< 0.1				
		0.10	μg/L		2 µg/L	83.4	65.8	12
EP132: 2-Methylnaphthalene	91-57-6	0:1	μg/L	<0.1	****			
		0.50	μg/L		2 pg/L	90.0	67.7	11
P132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	μg/L	<0.1				_
		0.10	μg/L		2 sig/L	82.5	11.6	140
P132: Acenaphthene	83-32-9	0.1	μg/L	<0.1				
		0.10	μg/L		2 μg/L	88.1	73.2	11
EP132: Acenaphthylene	208-96-8	0.1	μg/L	<0.1				
		0.10	μg/L		2 μg/L	92.5	72.4	113
EP132; Anthracene	120-12-7	0.1	μg/L	<0.1	:			
		0.10	. μg/L		2 μg/L	91.3	73.4	; 11:
EP132: Benz(a)anthracene	56-55-3	0.1	μg/L	<0.1				-
		0.10	μg/L	:	2 μg/L	91.7	73.6	1/14
P132: Benzo(a)pyrene	50-32-8	0.05	μg/L	<0.05	2 μg/L	91.0	75.2	11
EP132: Benzo(b)fluoranthene	205-99-2	0.1	μg/L	<0.1				
		0.10	μg/L		2 μg/L	90.9	71.4	119
EP132: Benzo(e)pyrene	192-97-2	0.1	μg/L	<0.1				
		0.10	μg/L	.5	2 µg/L	91.3	75.3	118
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	μg/L	<0.1				
		0.10	μg/L		2 μg/L	92.6	66.6	12
EP132: Benzo(k)fluoranthene	207-08-9	0.1	μg/L	<0.1	- 1991			
.,		0.10	μg/L		2 μg/L	91.1	74.8	118
P132: Chrysene	218-01-9	0.1	μg/L	<0.1			-	
,		0.10	μg/L	Angere -	2 μg/L	92.2	69.6	120
EP132: Coronene	191-07-1	0.1	μg/L	<0.1			-	
		0.10	μg/L		2 μg/L	95.2	47.4	131
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	μg/L	< 0.1		-		
		0.10	μg/L		2 µg/L	95.8	71.5	117

Work Order

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Client

: ALS TECHNICHEM (HK)

Project



Sub-Matrix: WATER				Married Elimit (#E)		Luboratory Control Spike (LCS) Report		
				Herari -	\$M/84	Sollie Recovery (%)	Настину	Limits (%)
Mémos: Compagna.	£42 Nimbbo	1.04	Linu	Dongall	Canagamathia	158	= 1204	Hali
EP132B: Polynuciear Aromatic Hydrocarbons (QC	Lot: 759512) - continued							
EP132: Fluoranthene	206-44-0	0.1	μg/L	<0.1		MATT NO YE		
		0.10	μg/L	·	2 μg/L	92.4	74.8	117
EP132: Fluorene	86-73-7	0.1	μg/L	<0.1				
		0.10	μg/L		2 μg/L	90.5	72.9	114
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	μg/L	<0.1				
, , , , , , , , , , , , , , , , , , , ,		0.10	μg/L		2 μg/L	94.6	67.8	119
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	μg/L	<0.1				
•		0.10	µg/L		2 μg/L	97.0	53.6	131
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1				
		0.10	µg/L		2 μg/L	93.7	68.3	116
EP132: Perylene	198-55-0	0.1	µg/L	<0.1				
·	:	0.10	μg/L		2 μg/L	90.9	68	122
EP132: Phenanthrene	85-01-8	0.1	μg/L	<0.1				
		0.10	µg/L		2 μg/L	93.7	74.8	112
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1				
		0.10	µg/L		2 μg/L	92.8	75.1	117

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Work Order ES0813042 Amendment 1
Client ALS TECHNICHEM (HK)

Project : ---



#### Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix offects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs), Ideal recovery ranges stated may be waived in the event of sample matrix interference.

• No Matrix Spike (MS) Results are required to be reported.

### ALS Technichem (HK) Pty Ltd

#### **ALS Laboratory Group**

ANALYTICAL CHEMISTRY & TESTING SERVICES



#### CERTIFICATE OF ANALYSIS

Client Laboratory Page : ERM HONG KONG : ALS Technichem (HK) Pty Ltd : 1 of 7

Contact : MS KAREN LUI Contact : Wong Wai Man, Alice Work Order HK0814214

> Address : 21/F, LINCOLN HOUSE, 979 KING'S ROAD, : 11/F., Chung Shun Knitting Centre, TAIKOO PLACE, ISLAND EAST, 1 - 3 Wing Yip Street,

QUARRY BAY, HONG KONG Kwai Chung, N.T., Hong Kong

: Karen.Lui@erm.com E-mail : Alice.Wong@alsenviro.com

E-mail Telephone Telephone : +852 2271 3000 : +852 2610 1044

Facsimile Facsimile : +852 2723 5660 : +852 2610 2021

Project : EM&A FOR THE PERMANENT AVIATION FUEL Quote number Date Samples Received : 17-SEP-2008

**FACILITY** 

Order number Issue Date : 09-OCT-2008 : ----

C-O-C number No. of samples received : 18 Site No. of samples analysed : 18

#### General Comments

Address

This report supersedes any previous report(s) with this reference. Results apply to the 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 processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client. The completion date of analysis is: 23-SEP-2008

Key: LOR = Limit of reporting; CAS Number = Chemistry Abstract Services number

Specific comments for Work Order: HK0814214

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.

This report may not be reproduced except with prior written approval from the testing laboratory.

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 Hong Kong, Chapter 553, Section 6.

Signatories Position Authorised results for Anh Ngoc Huynh Senior Chemist **Organics** 

Page Number : 2 of 7

Client : ERM HONG KONG

Work Order HK0814214



Sub-Matrix: MARINE WATER		Clie	nt sample ID	MPB1 ME	MPB1 ME DUP	MPB2 ME	MPB2 ME DUP	MP ME
	Cli	ent samplin	g date / time	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]
Compound	CAS Number	LOR	Unit	HK0814214-001	HK0814214-002	HK0814214-003	HK0814214-004	HK0814214-005
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides					'			
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organo	ochlorine Pesticides Surrog	ate					Surrogate control lim	its listed at end of this re
Decachlorobiphenyl	2051-24-3	0.1	%	98.6	98.6	99.3	94.8	80.3

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Client : ERM HONG KONG



Sub-Matrix: MARINE WATER		Clie	nt sample ID	MP ME DUP	C2 (NM5) ME	C2 (NM5) ME DUP	MPB1 MF	MPB1 MF DUP
	Clie	ent samplin	g date / time	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]
Compound	CAS Number	LOR	Unit	HK0814214-006	HK0814214-007	HK0814214-008	HK0814214-009	HK0814214-010
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides	<u> </u>							
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organo	chlorine Pesticides Surrog	ate					Surrogate control lir	nits listed at end of this report.
Decachlorobiphenyl	2051-24-3	0.1	%	93.1	96.6	95.4	102	105

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Client : ERM HONG KONG



Sub-Matrix: MARINE WATER		Clie	ent sample ID	MPB2 MF	MPB2 MF DUP	MP MF	MP MF DUP	C1 (NM3) MF
	Cli	ient sampli	ng date / time	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]
Compound	CAS Number	LOR	Unit	HK0814214-011	HK0814214-012	HK0814214-013	HK0814214-014	HK0814214-015
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065B: Organochlorine Pesticides								
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01	<0.01	<0.01
EP-065S: PCB Congeners and Organo	chlorine Pesticides Surrog	jate					Surrogate control lir	nits listed at end of this report
Decachlorobiphenyl	2051-24-3	0.1	%	92.5	101	92.6	89.0	93.9

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Client : ERM HONG KONG



Sub-Matrix: MARINE WATER		Clie	nt sample ID	C1 (NM3) MF DUP	C3 (NM6) MF	C3 (NM6) MF DUP		
	Clie	ent samplin	ng date / time	[17-SEP-2008]	[17-SEP-2008]	[17-SEP-2008]		
Compound	CAS Number	LOR	Unit	HK0814214-016	HK0814214-017	HK0814214-018		
EP-065A: PCB Single Congeners								
PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	<0.01		
PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	<0.01		
EP-065B: Organochlorine Pesticides							·	
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	<0.01		
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	<0.01		
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	<0.01		
EP-065S: PCB Congeners and Organo	chlorine Pesticides Surrog	ate					Surrogate control limits liste	ed at end of this repor
Decachlorobiphenyl	2051-24-3	0.1	%	102	103	99.0		

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Client : ERM HONG KONG

Work Order HK0814214



#### Laboratory Duplicate (DUP) Report

Matrix: WATER				La	aboratory Duplicate (DUP)	Report		
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)
EP-065A: PCB Sing	le Congeners (QC Lot:	763840)						
HK0814214-001	MPB1 ME	PCB 8	34883-43-7	0.01	μg/L	<0.01	<0.01	0.0
		PCB 18	37680-65-2	0.01	μg/L	<0.01	<0.01	0.0
		PCB 28	7012-37-5	0.01	μg/L	<0.01	<0.01	0.0
		PCB 52	35693-99-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 44	41464-39-5	0.01	μg/L	<0.01	<0.01	0.0
		PCB 66	32598-10-0	0.01	μg/L	<0.01	<0.01	0.0
		PCB 101	37680-73-2	0.01	μg/L	<0.01	<0.01	0.0
		PCB 77	32598-13-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 149	38380-04-0	0.01	μg/L	<0.01	<0.01	0.0
	PCB 118	31508-00-6	0.01	μg/L	<0.01	<0.01	0.0	
		PCB 153	35065-27-1	0.01	μg/L	<0.01	<0.01	0.0
		PCB 105	32598-14-4	0.01	μg/L	<0.01	<0.01	0.0
		PCB 138	35065-28-2	0.01	μg/L	<0.01	<0.01	0.0
		PCB 126	57465-28-8	0.01	μg/L	<0.01	<0.01	0.0
		PCB 187	52663-68-0	0.01	μg/L	<0.01	<0.01	0.0
		PCB 128	38380-07-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 156	38380-08-4	0.01	μg/L	<0.01	<0.01	0.0
		PCB 180	35065-29-3	0.01	μg/L	<0.01	<0.01	0.0
		PCB 169	60044-26-0	0.01	μg/L	<0.01	<0.01	0.0
		PCB 170	35065-30-6	0.01	μg/L	<0.01	<0.01	0.0
		PCB 195	52663-78-2	0.01	μg/L	<0.01	<0.01	0.0
P-065B: Organoch	lorine Pesticides (QC	Lot: 763840)						
HK0814214-001	MPB1 ME	4.4`-DDT	50-29-3	0.01	μg/L	<0.01	<0.01	0.0
		4.4`-DDE	72-55-9	0.01	μg/L	<0.01	<0.01	0.0
		4.4`-DDD	72-54-8	0.01	μg/L	<0.01	<0.01	0.0

#### Method Blank (MB), Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report

Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report						
					Spike	Spike Re	covery (%)	Recovery	Limits (%)	RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentratio	LCS	DCS	Low	High	Value	Control Limit
EP-065A: PCB Single Congeners (	QC Lot: 763840)				n						
PCB 8	34883-43-7	0.01	μg/L	<0.01	100 μg/L	85.9		50	130		
PCB 18	37680-65-2	0.01	μg/L	<0.01	100 μg/L	76.4		50	130		
PCB 28	7012-37-5	0.01	μg/L	<0.01	100 μg/L	63.6		50	130		
PCB 52	35693-99-3	0.01	μg/L	<0.01	100 μg/L	57.9		50	130		
PCB 44	41464-39-5	0.01	μg/L	<0.01	100 μg/L	56.9		50	130		
PCB 66	32598-10-0	0.01	μg/L	<0.01	100 μg/L	59.5		50	130		
PCB 101	37680-73-2	0.01	μg/L	<0.01	100 μg/L	58.2		50	130		

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Work Order HK0814214



Matrix: WATER			Method Blank (MB)	) Report		Laboratory Control Sp	Laboratory Control Spike (LCS) and Laboratory Control Spike Duplicate (DCS) Report					
					Spike	Spike Reco	very (%)	Recovery	Limits (%)	RI	RPD (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentratio	LCS	DCS	Low	High	Value	Control Limit	
EP-065A: PCB Single Congeners (QC	Lot: 763840) - Continue	ed			n							
PCB 77	32598-13-3	0.01	μg/L	<0.01	100 μg/L	66.4		50	130			
PCB 149	38380-04-0	0.01	μg/L	<0.01	100 μg/L	62.0		50	130			
PCB 118	31508-00-6	0.01	μg/L	<0.01	100 μg/L	66.4		50	130			
PCB 153	35065-27-1	0.01	μg/L	<0.01	100 μg/L	67.3		50	130			
PCB 105	32598-14-4	0.01	μg/L	<0.01	100 μg/L	70.6		50	130			
PCB 138	35065-28-2	0.01	μg/L	<0.01	100 μg/L	70.6		50	130			
PCB 126	57465-28-8	0.01	μg/L	<0.01	100 μg/L	73.1		50	130			
PCB 187	52663-68-0	0.01	μg/L	<0.01	100 μg/L	67.1		50	130			
PCB 128	38380-07-3	0.01	μg/L	<0.01	100 μg/L	72.3		50	130			
PCB 156	38380-08-4	0.01	μg/L	<0.01	100 μg/L	74.8		50	130			
PCB 180	35065-29-3	0.01	μg/L	<0.01	100 μg/L	74.6		50	130			
PCB 169	60044-26-0	0.01	μg/L	<0.01	100 μg/L	79.0		50	130			
PCB 170	35065-30-6	0.01	μg/L	<0.01	100 μg/L	77.7		50	130			
PCB 195	52663-78-2	0.01	μg/L	<0.01	100 μg/L	80.0		50	130			
EP-065B: Organochlorine Pesticides	(QC Lot: 763840)											
4.4`-DDT	50-29-3	0.01	μg/L	<0.01	100 μg/L	# Not Determined		50	130			
4.4`-DDE	72-55-9	0.01	μg/L	<0.01	100 μg/L	# Not Determined		50	130			
4.4`-DDD	72-54-8	0.01	μg/L	<0.01	100 μg/L	# Not Determined		50	130			

#### Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

• No Matrix Spike (MS) or Matrix Spike Duplicate (MSD) Results are required to be reported.

#### **Surrogate Control Limits**

Sub-Matrix: MARINE WATER		Recovery Limits (%)					
Compound	CAS Number	Low	High				
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate							
Decachlorobiphenyl	2051-24-3	50	130				

### ALS Laboratory Group

# ANALYTICAL CHEMISTRY & TESTING SERVICES ALS TECHNICHEM (HK) Pty Ltd

#### **Environmental Division**

## CERTIFICATE OF ANALYSIS

CONTACT: MS KAREN LUI CLIENT: ERM HONG KONG

ADDRESS: 21/F, LINCOLN HOUSE, 979 KING'S ROAD,

TAIKOO PLACE, ISLAND EAST, QUARRY BAY, HONG KONG.

PROJECT: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

HK0814214 Batch: HONG KONG LABORATORY: DATE RECEIVED: 17/09/2008

DATE OF ISSUE: 06/10/2008 SAMPLE TYPE: WATER No. of SAMPLES: 18

**COMMENTS** 

Sample(s) were collected by ALS Technichem (HK) staff on 17 September, 2008.

Water sample(s) analysed and reported on an as received basis.

PAHs were subcontracted and tested by ALS Sydney.

ALS Sydney details report was attached. The attached report contains a total of 15 pages.

#### Sample Details

ALS Lab ID	Sample ID	Date of Sampling
HK0814214 - 1	MPB1_ME	17/09/2008
HK0814214 - 2	MPB1_ME DUP	17/09/2008
HK0814214 - 3	0814214 - 3 MPB2_ME	
 HK0814214 - 4	MPB2_ME DUP	17/09/2008
HK0814214 - 5	MP_ME	17/09/2008
HK0814214 - 6	MP_ME DUP	17/09/2008
HK0814214 - 7	C2 (NM5)_ME	17/09/2008
HK0814214 - 8	C2 (NM5)_ME DUP	17/09/2008
HK0814214 - 9	MPB1_MF	17/09/2008
HK0814214 - 10	MPB1_MF DUP	17/09/2008
HK0814214 - 11	MPB2_MF	17/09/2008
HK0814214 - 12	MPB2_MF DUP	17/09/2008
HK0814214 - 13	MP_MF	17/09/2008
 HK0814214 - 14	MP_MF DUP	17/09/2008
HK0814214 - 15	C1 (NM3)_MF	17/09/2008
 HK0814214 - 16	C1 (NM3)_MF DUP	17/09/2008
 HK0814214 - 17	C3 (NM6)_MF	17/09/2008
HK0814214 - 18	C3 (NM6)_MF DUP	17/09/2008

#### **ISSUING LABORATORY: HONG KONG**

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Bogor

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**AUSTRALIA** 

**AMERICAS** 

Hong Kong Singapore Kuala Lumpur

Vancouver Santiago Amtofagasta Lima

Abbreviations: % SPK REC denotes percentage spike recovery

CHK denotes duplicate check sample LOR denotes limit of reporting

ALS Technichem IHKI Pty Ltd Part of the ALS Laboratory Group

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#### **Environmental Division**

#### CERTIFICATE OF ANALYSIS

: ES0813842 Work Order Page : 1 of 8

Client : ALS TECHNICHEM (HK) Laboratory : Environmental Division Sydney

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Project QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement Order number : ----

C-O-C number Date Samples Received : 22-SEP-2008 : ----Sampler Issue Date : 02-OCT-2008 : AW

Site : ----No. of samples received : 18

Quote number : SY/241/07 No. of samples analysed : 18

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



ACCREDITATION

NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories Position Accreditation Category Alex Rossi Organic Chemist Organics

3 of 8

Work Order - ES0813842

Client : ALS TECHNICHEM (HK)

Project · -

# ALS

#### General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA. APHA. AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been preformed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficit sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for processing purposes. If the sampling time is displayed as 0:00 the information was not provided by client.

Key:

CAS Number = Chemistry Abstract Services number

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

4 of 8 : ES0813842

Work Order

ALS TECHNICHEM (HK)

Client A

A

Sub-Matrix: <b>WATER</b>		Client sample ID		HK0814214_1 MPB1_ME	HK0814214_2 MPB1_ME DUP	HK0814214_3 MPB2_ME	HK0814214_5 MP_ME	HK0814214_6 MP_ME DUP	
	Clie	ent samp	ling date / time	17-SEP-2008 15:00	17-SEF-2006 75:00	17-SEP-2008 15:00	17-SEP-2008 15:00	17-SEP-2008 15:00	
Compound	CAS Number	LOF	Unit	ES0813842-001	ES0813842-002	ES0813842-003	E50813842-004	E\$0813842-005	
EP132B: Polynuclear Aromatic Hydro	carbons								
3-Methylcholanthrene	56-49-5	0.1	: μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
2-Methylnaphthalene	91-57-6	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Acenaphthene	83-32-9	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Acenaphthylene	208-96-8	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Anthracene	120-12-7	:0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(a)pyrene	50-32-8	0.05	μg/L	<0.05	<0.05	<0.05	<0.05	<0.05	
Benzo(b)fluoranthene	205-99-2	0.1	μg/L	< 0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(g.h.i)perylene	191-24-2	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Chrysene	218-01-9	0.1	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Coronene	191-07-1	0,1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<d.1< td=""><td>&lt; 0.1</td><td>&lt;0.1</td></d.1<>	< 0.1	<0.1	
Fluoranthene	206-44-0	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Fluorene	86-73-7	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Indeno(1.2.3,cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
N-2-Fluorenyl Acetamide	53-96-3	0.1	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Naphthalene	91-20-3	0.1	μg/L	< 0.1	<0.1	<0.1	<0.1	<0.1	
Perylene	198-55-0	0.1	pg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	50.1	<0.1	<0.1	
Pyrene	129-00-0	0.1	µg/Ł	<0,1	<0.1	<0.1	<0.1	<0.1	
EP132T: Base/Neutral Extractable Sur	rogates						50		
2-Fluorobiphenyl	321-60-8	0.1	%	89.9	72.4	70.8	87.7	92.3	
Anthracene-d10	1719-06-8	0.1	: %	90.6	79.5	76.6	86.1	92.1	
4-Terphenyl-d14	1718-51-0	0.1	%	89.6	77.3	74.7	85.0	89.4	

Work Order

5 of 8 ES0813842

Men Project ALS TECHNICHEM (HK)

Sub-Matrix: <b>WATER</b>	Cin		nt sample ID	HK0814214_7 G2(NM5)_ME 17-SEP-2008 15-00	HK0814214_8 G2(NM5)_ME DUP 17-SEP-2008 15:00	HK0814214_9 MPB1_MF	HK0814214_10 MPB1_MF DUP 17-SEP-2008 15:00	HK0814214_11 MPB2_MF 17-SEP-2008 15:00
Samulding	CAS	703000	Unit	ES0813842-006	ES0813842-007	ES0813842-068	ES0813842-009	E\$0813842-010
EP132B: Polynuclear Aromatic Hydr	ocarbons		0.00	1193				
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/Ł	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	83-32-9	0.1	μg/L	<0.1	<0.1	<0.1	- <0.1	<0.1
Acenaphthylene	208-96-8	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	120-12-7	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0,1
Benz(a)anthracene	56-55-3	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	50-32-8	0.05	μg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	205-99-2	0.1	μg/Ĺ	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(e)pyrene	192-97-2	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	218-01-9	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	191-07-1	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenz(a.h)anthracene	53-70-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	86-73-7	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
N-2-Fluorenyl Acetamide	53-96-3	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	91-20-3	0.1	µg/Ł	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	198-55-0	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	85-01-8	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	1.29-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Si	urrogates				74 4 10/2			
2-Fluorobiphenyl	321-60-8	0.1	%	93.9	86.7	87.3	90.2	96.1
Anthracene-d10	1719-06-8	0.1	%	92.5	87.0	85.6	90.6	97.3
4-Terphenyl-d14	1718-51-0	0.1	%	92.7	88.3	88.1	93.0	100

Page Work Oroci 6 of 8 ES0813842

Client

: ALS TECHNICHEM (HK)

Project

: ALS I



Sub-Matrix: WATER		С	Client sample ID	HK0814214_12 MPB2_MF DUP	HK0814214_13 MP_MF	HK0814214_14 MP_MF DUP	HK0814214_15 C1(NM3)_MF	HK0814214_16 C1(NM3)_MF DUP	
	Clie	Client sampling date / time			17-SEP-2008 15:00	17-SEP-2008 15:00	17-SEP-2008 15:00	17-SEP-2008 15:00	
Compound	CAS Number	LOH	Unit	ES0813842-011	ES0813842-012	ES0813842-013	ES0813842-014	ES0813842-015	
EP132B: Polymuclear Aromatic Hydro									
3-Methylcholanthrene	56-49-5	:0:1	μg/L	<0.1	<0.1	<0.1	<0,1	<0.1	
2-Methylnaphthalene	91-57-6	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
7.12-Dimethylbenz(a)anthracene	57-97-6	:0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Acenaphthene	83-32-9	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Acenaphthylene	208-96-8	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Anthracene	120-12-7	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(a)pyrene	50-32-8	0.05	ng/L	<0.05	<0.05	<0.05	<0.05	< 0.05	
Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(g.h.i)perylene	191-24-2	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Benzo(k)fluoranthene	207-08-9	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Chrysene	218-01-9	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Coronene	191-07-1	0.1	lig/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Dibenz(a.h)anthracene	53-70-3	0.1	μg/L	<0.1	<0.1	<0.1	<0.1	40.1	
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<q 1<="" td=""></q>	
Fluorene	86-73-7	0.1	ug/l.	<0.1	<0.1	<0.1	<0.1	₹0.1	
Indeno(1.2.3.cd)pyrene	193-39-5	0.1	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	
N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Naphthalene	91-20-3	0.1	µg/L	< 0.1	<0.1	<0.1	<0.1	<0.1	
Perylene	198-55-0	0.1	Jg/L	<0.1	<0.1	<0/1	<0.1	<0.1	
Phenanthrene	85-01-8	-0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1	
Pyrene	129-00-0	:0.1	ug/l.	<0.1	<0.1	<0.1	<0.1	<0.1	
EP132T: Base/Neutral Extractable Si	irrogates								
2-Fluorobiphenyl	321-60-8	0.1	' %	54.7	99.7	83.9	86.0	84.8	
Anthracene-d10	1719-06-8	0.1	%	56.7	100	83.7	86.5	86.0	
4-Terphenyl-d14	1718-51-0	0.1	%	58.5	102	85.9	89.5	88.3	

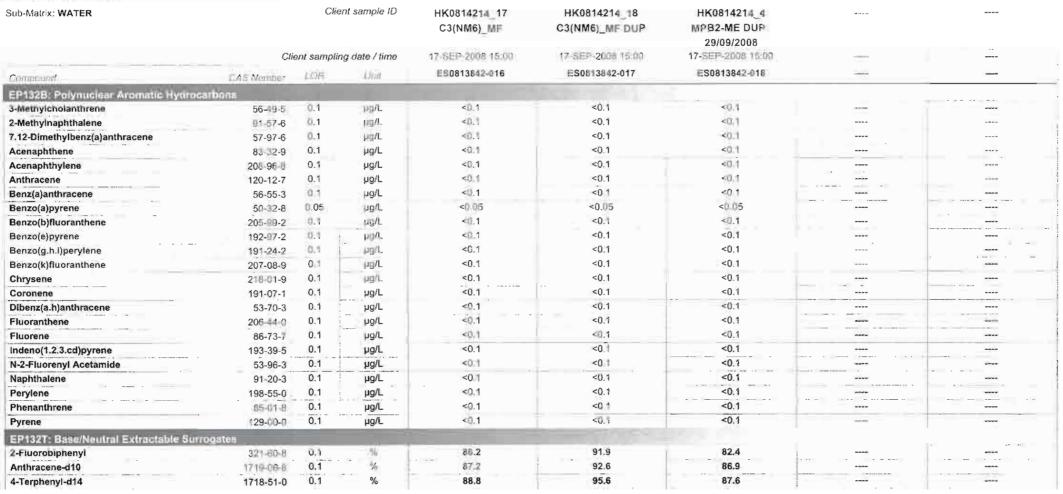
: 7 of 8

Work Order

ES0813842

Client Project ALS TECHNICHEM (HK)

Project : -





Werk Order : ES0813842

Client : ALS TECHNICHEM (HK)

8 of 8

Project : ---

# ALS

Surrogate Control Limits			
Exib-Mall (w): WATER		Recovery	Limita (%)
Compound	CAS Number	1.016	High
EP1327 Basa/Neutral Extractable Surregu	ille		
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141

# ALS Laboratory Group ANALYTICAL CHEMISTRY & JESTING SERVICES



#### **Environmental Division**

#### QUALITY CONTROL REPORT

Work Order : **ES0813842** Page : 1 of 7

Client : ALS TECHNICHEM (HK) Laboratory : Environmental Division Sydney

Contact : MS ALICE WONG Contact : Charlie Pierce

Address : 11/F CHUNG SHUN KNITTING CNTR Address : 277-289 Woodpark Road Smithfield NSW Australia 2164

1-3 WING YIP STREET

KWAI CHUNG, N.T HONG KONG HONG KONG

Telephone : +852 001185226101044 Telephone : +61-2-8784 8555
Facsimile : +852 26102021 Facsimile : +61-2-8784 8500

Project : --- QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement Site : ---

 C-O-C number
 : - Date Samples Received
 : 22-SEP-2008

 Sampler
 : AW
 Issue Date
 : 02-OCT-2008

Order number : --
No. of samples received : 18

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for

release.

This Quality Control Report contains the following information:

: SY/241/07

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



ACCREDITATION

Quote number

NATA Accredited Laboratory 825

This document is issued in accordance with NATA accreditation requirements.

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

: 18

Signatories Position Accreditation Category

Alex Rossi Organic Chemist Organics

No. of samples analysed

2 of 7

Work Order

ES0813842

Client : ALS TECHNICHEM (HK)

Project - ---



### General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been preformed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficit sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key:

Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot

CAS Number = Chemistry Abstract Services number

LOR = Limit of reporting

RPD = Relative Percentage Difference

# = Indicates failed QC

Page Work Order : 3 of 7

Work Order ES0813842

Client . Project :

, ALS TECHNICHEM (HK)



### Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:-No Limit; Result between 10 and 20 times LOR:-0% - 50%; Result > 20 times LOR:-0% - 20%.

• No Laboratory Duplicate (DUP) Results are required to be reported.

No Limit

: 4 of 7

Work Order

: ES0813842

Client

: ALS TECHNICHEM (HK)

Project

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### Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method i Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: WATER				Method Blank (MB)		Laboratory Control Spike (LCS) Report		
				Réport	Spike	Spike Recovery (%)	Recovery	Limits (%)
Mathad: Compound	CA5 Nunitive	LOR	Unit	rtesutt	Conventration	LCS	1,010	High
P132B: Polynuclear Aromatic Hydrocarbons (	(QCLot: 764633)							
F132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	****		—.·	
		0.10	µg/L		2 μg/L	85.6	65.8	121
EP132: 2-Methylnaphthalene	91-57-6	0.1	μg/L	<0.1				
		0.10	μg/L		2 μg/L	85.1	67.7	112
EP132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	μg/L	<0.1				
		0.10	μg/L		2 μg/L	83.5	11.6	146
EP132: Acenaphthene	83-32-9	0.1	μg/L	. <0.1				
	ř.	0.10	μg/L		2 µg/L	84.8	73.2	. 111
EP132: Acenaphthylene	208-96-8	0.1	µg/L	: <0.1				
		0.10	µg/L		2 µg/L	87.9	72.4	112
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1				,
		0.10	μg/L	1	2 μg/L	90.3	73.4	113
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1				-
		0.10	µg/L		2 μg/L	84.9	73.6	114
EP132: Benzo(a)pyrene	50-32-8	0,05	µg/L	<0.05	2 μg/L	83.6	75.2	117
EP132: Benzo(b)fluoranthene	205-99-2	0.1	μg/L	<0.1				
(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		0.10	μg/L		2 μg/L	91.0	71.4	119
EP132: Benzo(e)pyrene	192-97-2	0.1	μg/L	<0.1				
(1)		0.10	μg/L		2 μg/L	84.6	75.3	118
EP132: Benzo(g.h.i)perylene	191-24-2	0.1	μg/L	<0.1		· · · · · · · · · · · · · · · · · · ·		i
(3)		0.10	μg/L	:	2 µg/L	88.5	66.6	121
EP132: Benzo(k)fluoranthene	207-08-9	0.1	μg/L	<0.1				
		0.10	μg/L		2 µg/L	89.6	74.8	118
EP132: Chrysene	218-01-9	0.1	μg/L	<0.1			-	
- · · · · · · · · · · · · · · · · · · ·	_	0.10	μg/L		2 µg/L	85.1	69.6	120
EP132: Coronene	191-07-1	0.1	μg/L	<0.1				
		0.10	μg/L	2	2 μg/L	92.1	47.4	131
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	μg/L	<0.1				
er roe. Dioonzea.njananaoeno		0.10	μg/L		2 μg/L	84.9	71.5	117
EP132: Fluoranthene	206-44-0	0.1	μg/L	<0.1				
in the state of th	233 . , 0	0.10	μg/L		2 μg/L	85.3	74.8	117
EP132; Fluorene	86-73-7	0.1	μg/L	<0.1				
	20.00	0.10	μg/L		2 μg/L	86.5	72.9	114
EP132: Indeno(1.2.3.cd)pyrene	790-39-5	0.1	μg/L	<0.1		5		
c. 102. Induno 1.2.0.00/pyrene	.55 %	0.10	μg/L		2 μg/L	80.5	67.8	119

: 5 of 7

Work Order

: ES0813842

Chent

: ALS TECHNICHEM (HK)

Project



Life Aller 12: WATER		Multitad Blante (MB)			Libboratury Control Spine (LCS) Papers					
la.				Report	Saulka	Splike Recovery (%)	Rougeery	Recovery Limits (%)		
Matnad, Compayed	CAS Number	LOR	Non	Rasuli	Cancentration	7 C.S.	Los	Шig		
EP132B: Polynuclear Aromatic Hydrocarbons (C	CLot 764533) - continued									
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	μg/L	<0.1						
		0.10	µg/L		20 μg/L	69.6	53.6	131		
EP132: Naphthalene	91-20-3	0.1	μg/L	<0.1						
		0.10	μg/L		2 μg/L	85.2	68.3	116		
EP132: Perylene	198-55-0	0.1	μg/L	<0.1						
		0.10	μg/L		2 μg/L	86.6	68	122		
P132: Phenanthrene	85-01-8	0.1	μg/L	<0.1						
		0.10	μg/L		2 μg/L	94.6	74.8	112		
P132: Pyrene	129-00-0	0.1	μg/L	<0.1						
		0.10	µg/L	-	2 μg/L	85.8	75.1	117		
P1328: Polynuclear Aromatic Hydrocarbons (C	CLot: 770710)									
P132: 3-Methylcholanthrone	56-49-5 .	0.1	µg/L	<0.1			4	i		
		0.10	µg/L		2 μg/L	81.0	65.0	12		
P132: 2-Methylnaphthalene	91-57-6	0.1	μg/L	<0.1						
TOE. E TOURS HAMPING TO SEE THE SEE TH	21.37.41	0.10	µg/L		2 μg/L	83.9	67.7	112		
P132: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.1	μg/L	. <0.1						
		0.10	μg/L		2 μg/L	87.8	11.6	146		
P132: Acenaphthene	83-32-9	0.1	μg/L	<0.1						
		0.10	μg/L		2 µg/L	84.2	73.2	111		
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1						
- Total Production		0.10	μg/L		2 µg/L	85.7	72.4	112		
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1						
	11	0.10	μg/L		2 μg/L	86.4	73.4	113		
EP132: Benz(a)anthracene	56-55-3	0.1	μg/L	<0.1		***				
. 102. 2012(4)411111000110		0.10	μg/L		2 μg/L	92.3	73.6	114		
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	90.7	75.2	117		
EP132: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1				7-1		
- 195. Salasta Judo Carteriorio	=17.17.2	0.10	μg/L		2 μg/L	102	71.4	119		
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1						
Dones(e)pyrone	.020, 2	0.10	μg/L		2 μg/L	91.9	75.3	118		
EP132: Benzo(g.h.i)peryleпе	191-24-2		μg/L	<0.1	2 pg/L		70.3			
Trion. Doning(g.m.) per yiene	.0,2,2	0.10	μg/L		2 μg/L	94.1	66.6	121		
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1				. 121		
Total Control (Middle and Tene	25. 00 0	0.10	μg/L		2 μg/L	87.2	74.8	118		
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1		, , , , , , , , , , , , , , , , , , , ,	17.0	-		
IT 102. Offiyaene	210010	0.10	μg/L		2 μg/L	90.3	69.6	120		
EP132: Coronene	191-07-1	0.1	μg/L	<0.1	2 pg/L		3			
102. 0010116116	131-01-1	0.10	μg/L		2 μg/L	105	47.4	131		
EP132: Dibenz(a.h)anthracene	53-70-3	0.1	μg/L	<0.1	2 pg/c	103	47.4			
in 192. Studinz(a.tr)antistatue(IB	33-7 3-3	0.10	ρg.c μg/L	· · · · · · · · · · · · · · · · · · ·	2 μg/L	88.9	71.5	117		

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Sun-Marine WATER				Abothort History (AFS)		Laboratory Control Spine (LC3) Report			
				Report	Врика	Spike Recovery 24	Recove	ry <u>L</u> hinite (%).	
Method: Compound	CAS Number	LON	Unit	Paiult	Concentration,	LCS	Low	High	
EP132B Polynuclear Aromatic Hydrocarbon	s (QCLot 770718) - continued							114111111	
EP132: Fluoranthene	206-44-0	0.1	μg/L	<0.1					
		0.10	μg/L		2 μg/L	83.7	74.8	117	
EP132: Fluorene	86-73-7	0.1	μg/L	<0.1				Howa	
		0.10	μg/L		2 μg/L	83.9	72.9	114	
EP132: Indeno(1.2.3.cd)pyrene	193-39-5	0.1	μg/L	<0.1				****	
		0.10	μg/L		2 μg/L	89.0	67.8	119	
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1					
		0.10	μg/L		20 μg/L	70.9	53.6	131	
EP132: Naphthalene	91-20-3	0.1	μg/L	<0.1		·			
		0.10	µg/L	-1-4	2 µg/L	89.3	68.3	. 116	
EP132: Perylene	198-55-0	0.1	µg/L	<0.1		<del></del>			
		0.10	μg/L		2 µg/L	90.8	68	122	
EP132: Phenanthrene	85-01-8	0.1	μg/L	<0.1					
		0.10	μg/L		2 μg/L	94.9	74.8	112	
EP132: Pyrene	129-00-0	0.1	μg/L	<0.1					
		0.10	μα/L		2 µg/L	92.4	75.1	117	

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Project . --

# ALS

### Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs), Ideal recovery ranges stated may be waived in the event of sample matrix interference.

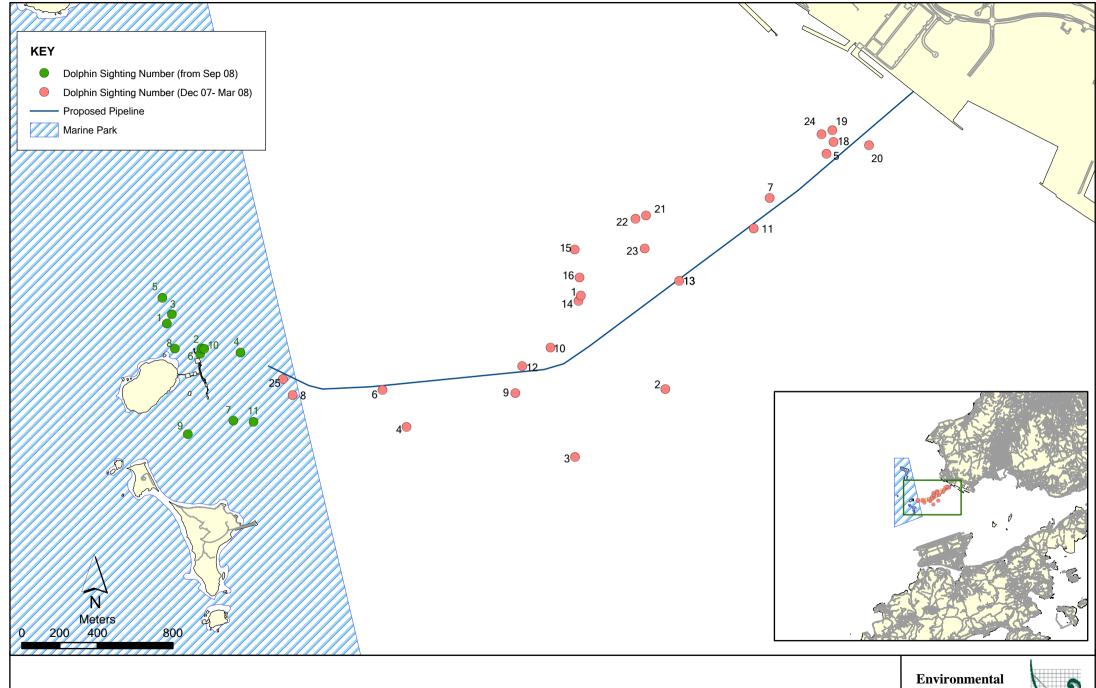
No Matrix Spike (MS) Results are required to be reported.

### Annex I

## Dolphin Sighting Records

Project name: EM&A for Permanent Aviation Fuel Facility (PAFF)
Activity: Dolphin Impact Monitoring - Field Log Sheet
\*Remark: Record the number of dolphin occurrence within the 250m exclusion (A) prior to dredging and (B) during dredging

Week	D	ate	Dredger 1 No. of Dolphin Occurrence*	Sighting No.	Observers' Names					
				Oigning No.						
1	Mon	01-Sep	No Dredging	-	Richard Huang					
	Tue	02-Sep	15	1-7	Anton Tsang					
	Wed	03-Sep	2	8	Anton Tsang					
	Thu	04-Sep	1	9	Richard Huang					
	Fri	05-Sep	1	10	Anton Tsang					
	Sat	06-Sep		No Dredging						
	Sun	07-Sep		No Dredging						
2	Mon	08-Sep	No Dredging		Richard Huang					
	Tue	09-Sep	0	-	Anton Tsang					
	Wed	10-Sep	0	-	Anton Tsang					
	Thu	11-Sep	0 -		Richard Huang					
	Fri	12-Sep	0	-	Anton Tsang					
	Sat	13-Sep		No Dredging						
	Sun	14-Sep								
3	Mon	15-Sep								
	Tue	16-Sep	0	-	Richard Huang					
	Wed	17-Sep	0	-	Anton Tsang					
	Thu	18-Sep	0	-	Richard Huang					
	Fri	19-Sep	0	-	Anton Tsang					
	Sat	20-Sep								
	Sun	21-Sep		No Dredging						
4	Mon	22-Sep	No Dredging	-	Ivy So					
	Tue	23-Sep	No Dredging	-	Anton Tsang					
	Wed	24-Sep	No Dredging due to	typhoon	-					
	Thu	25-Sep	0	-	Richard Huang					
	Fri	26-Sep	0	Ivy So						
	Sat	27-Sep		No Dredging	,					
	Sun	28-Sep	No Dredging							



Dolphin Sighting Locations (as of 30 September 2008)

Environmental Resources Management



### Permanent Aviation Fuel Facility (PAFF) - Dolphin Sighting Records

Sighting			Sighting							
No.	Date	Time	Distance	#Sighting Angle from Dredging Machine (o)	Group size	Group Composition*	Beaufort	<b>Boat Association</b>	Behaviour	Other comments
1	2/9/2008	1000	275	320	4	2UA, 1 SA, 1 SJ	1	None	Feeding, Travelling	Before Dredging
2	2/9/2008	1024	80	5	2	2UA	1	None	Breaching, Spy-hopping	Before Dredging
3	2/9/2008	1035	300	330	2	1UA, 1SA	1	None	Travelling	Before Dredging
4	2/9/2008	1045	220	75	3	1UA, 1SA, 1UJ	1	None	Travelling	Before Dredging
5	2/9/2008	1108	400	330	1	1SA	1	None	Travelling	Before Dredging
6	2/9/2008	1411	50	0	1	1UA	2	None	Travelling	During Dredging
7	2/9/2008	1530	350	150	2	2UA	2	None	Travelling	During Dredging
8	3/9/2008	1535	155	300	2	2UA	1	None	Travelling	During Dredging
9	04/09/2008	1336	380	190	2	2UA	2	None	Travelling	During Dredging
10	5/9/2008	1711	80	15	1	1UA	2	None	Travelling	Dredging Stopped
11	30-Sep-08	1050	250	350	4	4UA	2	None	Travelling	Before Dredging
*Ke	V.									
1.0	· ·		# (	Compass bearing is used (North = 0 degree)						
LIC	= Unspotted Ca	alf								
	= Unspotted Ju									
	= Spotted Juve									
	= Spotted Sub-									
1 1	= Spotted Adul									
1 1	= Unspotted Addi									
UA	- Onspolled At	uuit								

Sighting				Location of		Dredger Coordinates -	Dredger Coordinates -	Sighting	Sighting Angle from Dredging	Group		Beauf	Boat		
No.	Date	Time	Dredger	Dredger	Chainage	N	E	Distance (m)	Machine (o)	size	Group Composition*		Association	Behaviour	Other comments
1	21/12/2007	1455	GD 4503	Sha Chau	1995	808777.45	824153.43	90	38	3	1SJ, 1SS, 1UA	1	None	Travelling	-
					2000	808773.41	824153.49								
2	25/12/2007	1400	GD 4503	Sha Chau	2110	808685	824088.1	600	225	3	1SJ, 2UA	1	None	Travelling	-
					2120	808676.9	824082.07								
3	28/12/2007	0928	GD 4503	Sha Chau	2630	808252.09	823804.52	620	225	1	1UA	1	Shrimp trawler	Feeding	-
					2645	808237.73	823800.24								
4	2/1/2008	1249	GD 4503	Sha Chau	2985	807899.66	823769.42	290	290	1	1UA	3	None	Travelling	-
					3010	807874.73	823767.73								
5	24/01/2008	1400	GD 4503	Urmston Road	700	809818.64	824926.29	183	190	1	1UA	2	None	Travelling	-
					710	809810.63	824920.38								
6	27/01/2008	0815	GD 654	Sha Chau	3218	807666.91	823754.86	56	280	3	3UA	3	None	Travelling	-
					3250	807635.3	823753.07								
7	31/01/2008	1620	GD 4503	Urmston Road	1035	809549.46	824727.19	150	200	1	1UA	2	None	Travelling	-
					1055	809533.22	824715.36								
															Approaching dredger since being sighted, closest distance aboug
8	04/02/2008	0827	GD 654	Sha Chau	3540	807345.7	823735.42	180	330	3	1UA, 2SS	3	None	Travelling	100m, then out of sight after dive
					3570	807315.78	823733.52								
9	12/02/2008	0815	GD 654	Sha Chau	2354	808496.01	823948.14	100	300	2	1UA, 1SA	3	None	Breaching	-
					2365	808479.88	823936.54								
10	15/02/2008	1619	GD 654	Sha Chau	2235	808584.53	824013.58	100	300	2	1UA, 1SS	2	None	Travelling	During dredging
					2240	808580.47	824010.91								
11	16/02/2008	0949	GD 4503	Urmston Road	1355	809292	824537.03	323	190	1	1UA	2	None	Travelling	-
					1370	809280.05	824527.75								
12	16/02/2008	1604	GD 654	Sha Chau	2610	808271.18	823810.65	120	170	1	1UA	2	None	Travelling	-
					2615	808266.33	823808.98								
13	18/02/2008	0806	GD 654	Sha Chau	1875	808873.92	824227.762	350	180	1	1UA	2	Hang trawler	Feeding	Before dredging
					1845	808898.043	824245.597								
14	19/02/2008	0812	GD 654	Sha Chau	1855	808889.87	824239.57	213	350	1	1UA	2	None	Travelling	No dredging, Dredger under repair
					1881	808869.34	824224.42								
15	20/02/2008	0927	GD 654	Sha Chau	1820	808918.13	824260.54	310	45	2	2UA	2	None	Travelling	No dredging, Dredging was not carried out until 11:30am
40	0.4 /0.0 /0.0.0	0740	00.054	01 01	1811	808925.65	824265.81	400			400 0114		01 :	- "	
16	21/02/2008	0749	GD 654	Sha Chau	1880	808869.9	824224.79	190	30	3	1SS, 2UA	2	Shrimp trawler	Feeding	No dredging
					1885	808865.88	824221.82							Travelling, breaching, spy-	
17	21/02/2008	1001	GD654	Sha Chau		On mobilization		150	80	4	3UA, 1UJ	2	None	hopping	No dredging
18	23/02/2008	1323	ST20	Urmston Road	565	809927.43	825006.52	110	195	1	1UA	1	None	Feeding	During dredging
					571	809922.44	825002.96								

19	07/03/2008	1018	ST20	Urmston Road	450	810019.75	825074.94	11	200	1	1UA	2	None	Traveling	
	01/00/2000		0.20	- Cimotoni i toda	460	810011.71	825068.99		200				110.10	vom.ig	
														Spy-hopping,	
														traveling,	
														breaching,	
20	07/03/2008	1117	ST20	Urmston Road	450	810019.75	825074.94	180-220	70-220	1	1UA	2	None	porpoishing	
	01700/2000		0.20	- Cimoton rtoda	460	810011.71	825068.99	.00 220	. 0 220	1			110.10	porpoloring	
21	10/03/2008	1147	ST20	Urmston Road	1605	809091.025	824388.279	240	90	2	1UA, 1SJ	2	None	Travelling	No dredging
	.0/00/2000		0.20	Cimoton redu	1540	809143.291	824426.922	2.0		_	1071, 100		. 10.10	g	a.cagg
					1010	0001101201	02 : 120:022			1					Dolphin-watching vessel passed
															by; Travelling away from dredger;
22	12/03/2008	1150	GD654	Urmston Road	1600	809095.045	824391.252	240	75	2	2UA	3	None	Travelling	During dredging
	12/00/2000	1100	ODOOT	Cimoton redu	1555	809131.229	824418.005	210	7.0	-	20/1		140110	g	2 amig arouging
					1000	000101.220	021110.000								Wandering around between
															distance of 80-300m from
															dredger and stayed for ~6mins;
23	12/03/2008	1220	GD654	Urmston Road	1600	809095.045	824391.252	80	60	2	1UA, 1SJ	3	None	Feeding	No dredging
	12/00/2000	1220	OBOOT	Omnotom read	1555	809131.229	824418.005		- 00	_	1071, 100		140110	. ccag	i to di odging
24	21/032008	1620	GD31	Urmston Road	550	809939.34	825015.48	51	150	2	2UA	2	None	Travelling	-
	21/002000	.020	020.	o.moton rtoda	560	809931.29	825009.54	<u> </u>		_	2071		. 10.10	g	
25	25/03/2008	1110	GD31	Urmston Road	750	807161.08	823724.02	50	30	1	1UA	2	None	Travelling	-
					760	807111.18	823720.96								
*Key	:														
UC =	Unspotted Calf														
UJ =	Unspotted Juver	nile													
SJ =	Spotted Juvenile	9													
SS =	Spotted Sub-ad	ult													
SA =	Spotted Adult														
UA =	Unspotted Adult	t													
	•														
	1		l			1			1		1		I .	1	

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