

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

Fifteenth Monthly Environmental Monitoring and Audit Report – January 2008

12th February 2008

Environmental Resources Management

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Permanent Aviation Fuel Facility for Hong Kong International Airport

**Environmental Certification Sheet
EP-262/2007/A**

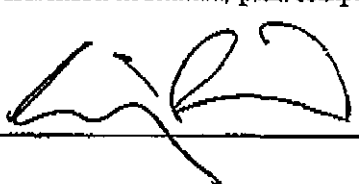
Reference Document/Plan

Document/Plan to be Certified/ Verified:	15 th Monthly EM&A Report - January 2008
Date of Report:	12 th February 2008
Date prepared by ET:	12 th February 2008
Date received by IEC:	12 th February 2008

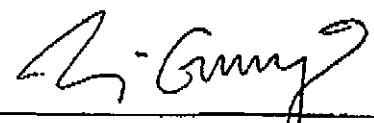
Reference EP Condition

Environmental Permit Condition:	Condition No.: 5.3
Content:	<i>Environmental Monitoring and Audit (EM&A) for the Project</i>
5.3	Four hard copies and one electronic copy of the monthly EM&A Report for the Project shall be submitted to the Director within 2 weeks after the end of the reporting month. The submissions shall be certified by the ET Leader and verified by the IEC before submission to the Director. Additional copies of the submission shall be provided upon request by the Director.

ET Certification

I hereby certify that the above referenced document/ plan complies with the above referenced condition of EP-262/2007/A	
Craig A Reid, Environmental Team Leader:	 Date: 12 th February 2008

IEC Verification

I hereby verify that the above referenced document/ plan complies with the above referenced condition of EP-262/2007/A	
Dr Guiyi Li, Independent Environmental Checker:	 Date: 14 Feb 2008


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

Permanent Aviation Fuel Facility (EP-262/2007/A) Fifteenth Monthly Environmental Monitoring and Audit Report – January 2008

12th February 2008

Prepared by: Karen Lui/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: 12 th February 2008

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EXECUTIVE SUMMARY

The construction works for the Permanent Aviation Fuel Facility resumed on 9th July 2007. This **fifteenth** monthly Environmental Monitoring and Audit (EM&A) report presents the EM&A works carried out during the period from **1st January to 31st January 2008** in accordance with the *EM&A Manual*.

Breaches of all Action and Limit Levels

Daily exceedance (with exception of 16 and 24 January 2008) of Action Levels of Turbidity was found and occasional exceedance of Action Limit Levels of Suspended Solids was found on 11, 23 and 29 January 2008. Following review of data in accordance with the procedures specified in the *EM&A Manual*, these exceedances were considered due to natural fluctuation from the Pearl River discharge rather than the Project Works.

Complaint Log

No environmental complaints were received during the reporting period.

Notifications of any Summons and Successful Prosecutions

No environmental summon or prosecutions were 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;
- Water quality monitoring and dolphin monitoring during the dredging activities; and,
- Marine Archaeological Inspection (MAI) during dredging activities.

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

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

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

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

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

1.1

PURPOSE OF THE REPORT

This is the **fifteenth** EM&A Report which summarizes the monitoring results and audit findings for the EM&A programme during the reporting period from **1st January to 31st January 2008**.

2 ENVIRONMENTAL STATUS

2.1 PROJECT AREA

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

2.2 ENVIRONMENTAL SENSITIVE RECEIVERS

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

2.3 MAJOR CONSTRUCTION ACTIVITIES

A summary of the major works undertaken in this reporting period is shown in *Table 2.1*. *Table 2.2* presented the cumulative quantity of excavated materials up to 31 January 2008. Inside the Sha Chau and Lung Kwu Chau Marine Park, dredging operation was carried out from 7 to 23 January 2008.

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 31 January 2008

Type of Excavated Materials	Cumulative Bulk Volume (m ³)
Contaminated Mud	45,922
Uncontaminated Mud	44,316

2.4 MONITORING SCHEDULE OF THE REPORTING MONTH

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

2.5 STATUS OF ENVIRONMENTAL APPROVAL DOCUMENTS

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

Table 2.2 Summary of Environmental Licensing, Notification and Permit Status

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

2.6 COMMUNITY LIAISON GROUP MEETING

According to the EP requirements, a Community Liaison Group (CLG) shall be established within three months after commencement of construction of the Project. The major duty of the 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, there was no meeting or site visit organised by the CLG.

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 daily exceedance of Action Levels of Depth-averaged Turbidity with exception of 16 and 24 January 2008. There was exceedance of the Action Levels of Depth-averaged Suspended Solids (SS) on the 11, 23 and 29 January 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 complaints were received during the reporting period. A summary of environmental complaints since project commencement is presented in *Annex D*.

2.9 SUMMARY OF ENVIRONMENTAL SUMMONS

No summons were received in this reporting period. A 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, 11, 16 and 24 January 2008. Overall, the site was in good orderly manner and no non-compliance was found. Environmental deficiencies and follow-up actions/mitigation measures were identified during the inspections, as follows:

Air Quality

- Water tankers were used regularly to wet the road surface to minimize dust emission.
- Site entrance was paved and wheel-washing facility was provided to avoid dust deposit on the public road.
- Main access road within the site (between site office and exit) was paved to avoid dust emission. Other sections of the major access road in the construction area were paved with stones.

Noise

- No noisy activities were conducted during the audit.
- All air compressors on site were operated with a valid noise label.

Water Quality

- Site toilets were provided on site. A soil soakaway system with holding tanks was installed to treat the sewage from the toilets. No effluent discharge out of the site was made.
- The site canteen is no longer in operation and hence no waste water is generated.

Waste Management

- During the site inspection on 4 and 24 January 2008, water ponding was found near site entrance. The Contractor was recommended to clear the ponding in accordance with the procedures presented in the EIA.
- During the site inspection on 4 January, excavated materials near the site entrance were not watered properly. The Contractor was recommended to water excavated materials in accordance with the procedures presented in the EIA to avoid fugitive dust generation.

- During the site visit on 4, 11 and 16 January, chemical storage tanks on dredger GD4503 were not labeled and stored properly. The Contractor was recommended to ensure proper chemical management in accordance with the procedures presented in the EIA.

Landscape and Visual

- The transplanted trees at the new site were in good and healthy condition; and,
- The berm was habilitated by vegetation.

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

3.2

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

Water quality monitoring during dredging activities recorded daily exceedance of Action Levels of Depth-averaged Turbidity, with exception of 16 and 24 January 2008. There was exceedance of the Action Levels of Depth-averaged Suspended Solids (SS) on the 11, 23 and 29 January 2008. Details of exceedance were presented in the monitoring results *Annex G*. Descriptions of the actions taken following identification of non-compliance are discussed in *Section 3*.

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

- Exceedance of Action Level of depth-averaged Turbidity was found on 17, 21, 22, 31 December 2007 and 4, 5 January 2008 (when no dredging was undertaken), whose values were comparable to those of days with dredging operations
- Depth-averaged DO, bottom DO and depth-averaged SS did not show the same trend of exceedance

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

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

During impact monitoring on both ebb and flood tides, turbidity and SS levels at all stations are generally comparable with those levels recorded during the

baseline monitoring. It is more likely that the waters upstream of the works site are influenced by other factors, such as natural fluctuations of turbidity and SS observed in the Pearl River Estuary.

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

3.2.1 *Follow-up Action following Non-Compliance*

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

3.2.2 *Recommendation following Non-Compliance*

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

Further to the communications with the IEC and the EPD, amendment of AL Levels of Turbidity was approved and will be presented in the revised *Baseline Water Quality Monitoring Report*.

3.3 *IMPLEMENTATION STATUS ON ENVIRONMENTAL PROTECTION REQUIREMENTS*

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

4 ENVIRONMENTAL MONITORING

4.1 AIR AND NOISE

Air and Noise monitoring is not required for the project.

4.2 WATER QUALITY

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

Results of the monitoring demonstrated that all measured dissolved oxygen levels of all Impact Stations were compliant with the Action and Limit (AL) Levels specified in the *EM&A Manual*. Concentrations of Suspended Solids (SS) were generally below AL Levels, however, exceedances were noted for 11, 23 and 29 January 2008. Turbidity levels were, however, above Action Levels on a daily basis (except on 16 and 24 January 2008) during the reporting month. A review of the above exceedances concluded that these were not attributable to Project works and were likely due to natural variation (see *Section 3.2* for further details).

4.3 POPS MONITORING

Biweekly monitoring of water samples was conducted for POPs analysis. At the time of this report, results were available for 26 December 2007 and 9 January 2008. 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*.

The remaining results of January's monitoring will be presented in the next *Monthly Monitoring Report* once they become available.

4.4 WASTE MANAGEMENT

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

4.5 CULTURAL HERITAGE

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

4.6 *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 habilitated 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*

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

Pursuant to *Condition 3.5* of the EP, the Contractor submitted three design drawings which address the specific sub-clauses on *Condition 3.5a* of the EP concerning the containment systems of aviation fuel storage tank farm. The ET and the IEC have provided certification and verification to the drawings respectively and the drawings were 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 to *EM&A Manual*, dolphin monitoring has been undertaken during dredging activities since 17 December 2007.

During the reporting period, one dolphin sightings were recorded outside the exclusion zone on 2 January 2008, with three dolphin sightings recorded within the exclusion zone on 24, 27 and 31 January 2008. Appropriate action was taken in accordance with the *EM&A Manual*. Sighting results are presented in *Table 4.1*.

Table 4.1 *Dolphin Sighting Records during the Reporting Period*

Date	Time	Dredger Identity	Sighting Distance from Dredger (m)	Group Size	Beaufort	Boat Association	Behaviour
02/01/2008	1249	GD 4503	290	1	3	None	Travelling
14/01/2008	1620	GD 4503	90	1	NA*	NA*	NA*
24/01/2008	1400	GD 4503	183	1	2	None	Travelling
27/01/2008	08115	GD 654	56	3	3	None	Travelling
31/01/2008	1620	GD 4503	150	1	2	None	Travelling

*Remark: One dolphin carcass sighting was recorded.

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 during construction of the Project. The updated *EM&A Manual* was revised accordingly to the comments received from the EPD on 6th December 2007 and was submitted to the EPD on 10th December 2007. Comments were received from the EPD on 22 January 2008. The ET will update the *EM&A Manual* accordingly within the next reporting period.

4.10 *BASILINE WATER QUALITY MONITORING*

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

5 *FUTURE KEY ISSUES*

5.1 *KEY ISSUES FOR THE NEXT ONE MONTH*

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

- Dust release and suppression;
- Operation of dredging activities;
- Water quality monitoring and dolphin monitoring during the dredging activities; and
- Marine Archaeological Inspection (MAI) during the dredging activities.

5.2 *IMPACT PREDICTION FOR THE NEXT ONE MONTH*

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

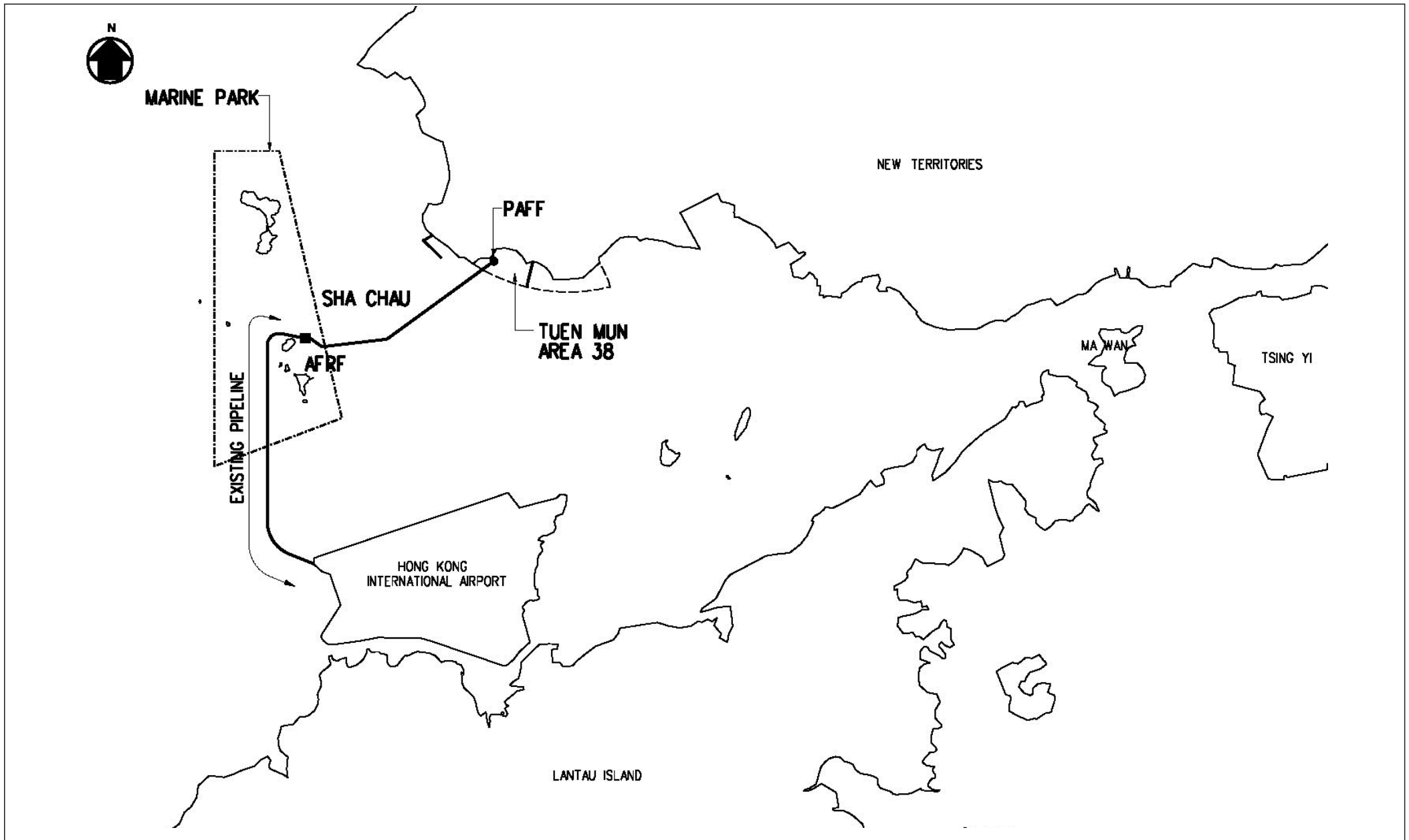
Based on the water quality monitoring results recorded to date, it may be expected that further exceedances in Turbidity and possibly Suspended Solids may be recorded. However, as with those recorded so far, it is not expected that such exceedances would be attributable to Project Works. It is noted that actions are underway to potentially revise the Action Limit Levels for Turbidity which may commence in the next reporting period.

5.3 *WORKS AND MONITORING SCHEDULE FOR THE NEXT ONE MONTH*

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

Annex A

Project Location



Annex A

Location of PAFF

FILE: 0018105bb1
DATE: 12/11/2007






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Annex B

Water Quality Monitoring
Stations, Water Quality and
Ecological Sensitive
Receivers

KEY

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

Marine Park
(Water Sensitive Receiver)

C2 (NM5)

C1 (NM3)

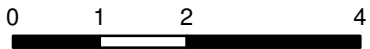
MPB1

MPB2

C3 (NM6)



Kilometers



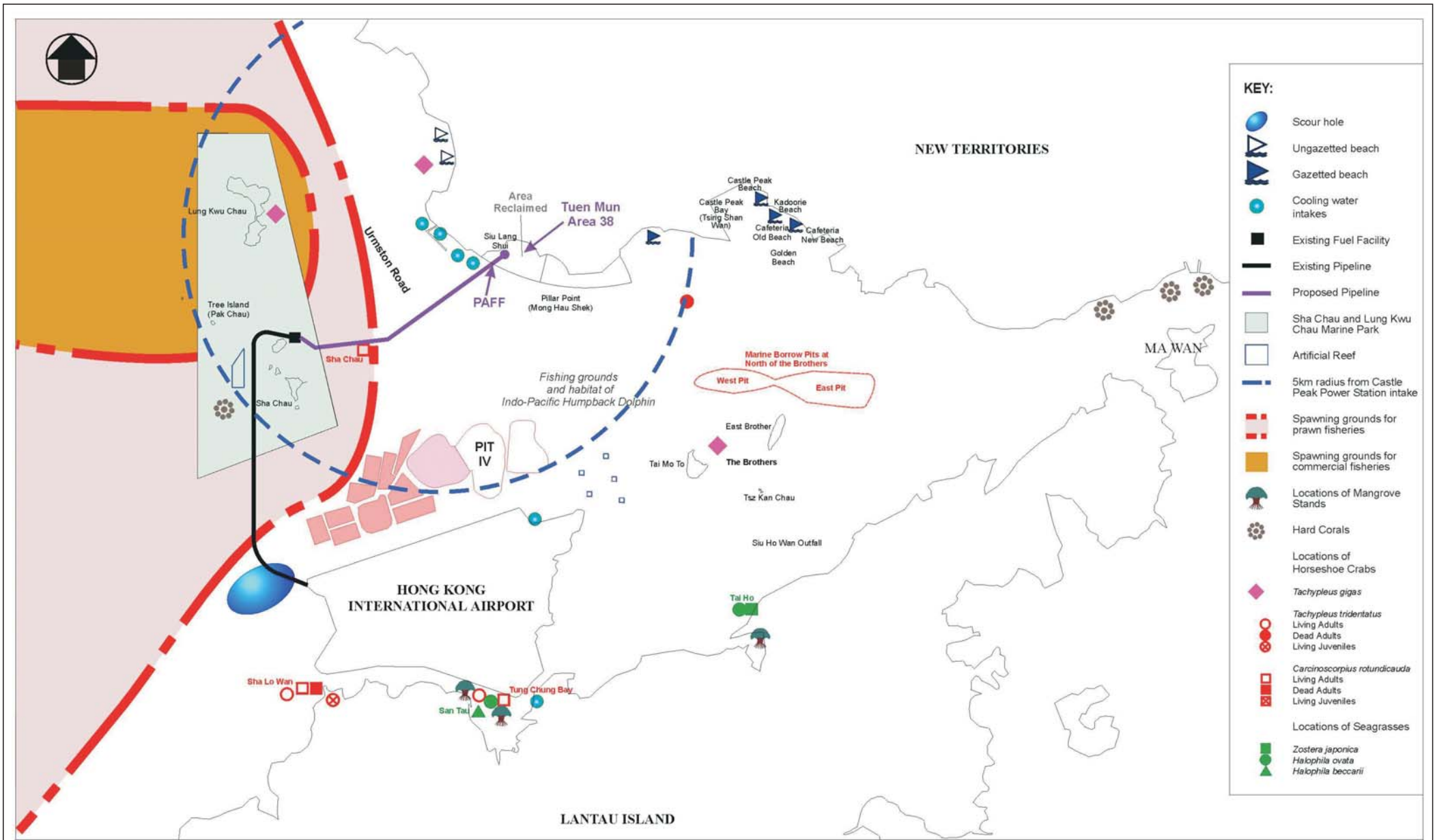
Annex B

Water Sensitive Receiver and Water Quality Monitoring Locations

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Annex B

Water Quality and Ecological Sensitive Receivers

FILE: C2475aa
DATE: 12/11/2007

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

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Annex C

Monitoring Schedule for the Reporting Period and Next Month

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

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

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

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

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

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

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					01-Feb	02-Feb
					Mid-Flood 09:08 Mid-Ebb 21:37	Mid-Flood 10:08 Mid-Ebb 22:24
03-Feb	04-Feb	05-Feb	06-Feb	07-Feb	08-Feb	09-Feb
Mid-Flood 10:53 Mid-Ebb 23:09	Mid-Ebb 11:34 Mid-Flood 16:06	Mid-Ebb 12:16 Mid-Flood 17:08	Mid-Ebb 07:46 Mid-Flood 12:54 <i>+POP Samples</i>			
10-Feb	11-Feb	12-Feb	13-Feb	14-Feb	15-Feb	16-Feb
Mid-Flood 09:17 Mid-Ebb 15:06	Mid-Flood 09:41 Mid-Ebb 15:44	Mid-Flood 10:09 Mid-Ebb 16:29	Mid-Flood 10:38 Mid-Ebb 17:27	Mid-Flood 11:12 Mid-Ebb 18:36	Mid-Ebb 06:29 Mid-Flood 11:50	Mid-Flood 08:53 Mid-Ebb 21:34
17-Feb	18-Feb	19-Feb	20-Feb	21-Feb	22-Feb	23-Feb
Mid-Flood 10:15 Mid-Ebb 22:41	Mid-Ebb 11:27 Mid-Flood 16:09	Mid-Ebb 12:11 Mid-Flood 17:19	Mid-Ebb 12:48 Mid-Flood 18:12 <i>+POP Samples</i>	Mid-Ebb 13:22 Mid-Flood 18:58	Mid-Flood 13:53 Mid-Ebb 19:39	Mid-Flood 08:40 Mid-Ebb 14:21
24-Feb	25-Feb	26-Feb	27-Feb	28-Feb	29-Feb	
Mid-Flood 08:59 Mid-Ebb 14:50	Mid-Flood 09:18 Mid-Ebb 15:22	Mid-Flood 09:39 Mid-Ebb 15:58	Mid-Flood 10:00 Mid-Ebb 16:40	Mid-Flood 10:18 Mid-Ebb 17:34	Mid-Ebb 10:21 Mid-Flood 19:13	

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

Annex D

Cumulative Complaints Statistics

Summary of Environmental Complaints

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

Summary of Environmental Summons

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

Annex E

Implementation Schedule

ANNEX E IMPLEMENTATION SCHEDULE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Annex F

QA/QC Results for
Laboratory Testing of
Suspended Solids



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0719037
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 1 Jan 2008
Order number	: ----			Date of issue	: 7 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0719037 supersedes any previous reports with this reference. The completion date of analysis is 4 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0719037 :
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.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 565644)								
HK0719037-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0719037-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 565645)								
HK0719037-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
HK0719037-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	21.9
EA/ED: Physical and Aggregate Properties (QC Lot: 565646)								
HK0719037-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
HK0719037-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 565647)								
HK0719037-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
HK0719037-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 565644)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 565645)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	88.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 565646)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 565647)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0719069
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E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
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Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 2 Jan 2008
Order number	: ----			Date of issue	: 7 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0719069 supersedes any previous reports with this reference. The completion date of analysis is 5 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0719069 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 566282)								
HK0719069-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
HK0719069-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	2	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566283)								
HK0719069-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
HK0719069-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566284)								
HK0719069-058	MPB1 M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0719069-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566285)								
HK0719069-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
HK0719069-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	18	21	13.1

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 566282)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566283)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566284)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566285)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800028
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E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 3 Jan 2008
Order number	: ----			Date of issue	: 8 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800028 supersedes any previous reports with this reference. The completion date of analysis is 7 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800028 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 566430)								
HK0800028-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
HK0800028-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566431)								
HK0800028-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0800028-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566432)								
HK0800028-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	13.0
HK0800028-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566433)								
HK0800028-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
HK0800028-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 566430)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566431)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	103	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566432)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566433)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800098
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 4 Jan 2008
Order number	: ----			Date of issue	: 9 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800098 supersedes any previous reports with this reference. The completion date of analysis is 7 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800098 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 566704)								
HK0800098-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	17.5
HK0800098-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566705)								
HK0800098-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0800098-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566706)								
HK0800098-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	15.6
HK0800098-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 566707)								
HK0800098-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
HK0800098-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	6	22.4

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 566704)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566705)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566706)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 566707)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800099
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 5 Jan 2008
Order number	: ----			Date of issue	: 9 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800099 supersedes any previous reports with this reference. The completion date of analysis is 9 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800099 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 567250)								
HK0800099-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	22.1
HK0800099-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 567251)								
HK0800099-024	IMO1 B DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
HK0800099-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	17.4
EA/ED: Physical and Aggregate Properties (QC Lot: 567252)								
HK0800099-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0800099-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 567253)								
HK0800099-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0800099-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 567250)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 567251)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 567252)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 567253)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800174
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 6 Jan 2008
Order number	: ----			Date of issue	: 9 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800174 supersedes any previous reports with this reference. The completion date of analysis is 9 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800174 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 567255)								
HK0800174-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
HK0800174-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 567256)								
HK0800174-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
HK0800174-046	C2 (NM5) M DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 567257)								
HK0800174-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0
HK0800174-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 567259)								
HK0800174-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	0.0
HK0800174-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 567255)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 567256)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 567257)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 567259)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800231
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 7 Jan 2008
Order number	: ----			Date of issue	: 10 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800231 supersedes any previous reports with this reference. The completion date of analysis is 9 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800231 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 568030)								
HK0800231-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	11	0.0
HK0800231-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 568031)								
HK0800231-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	11	0.0
HK0800231-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	24.6
EA/ED: Physical and Aggregate Properties (QC Lot: 568032)								
HK0800231-059	MPB1 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	10	0.0
HK0800231-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 568033)								
HK0800231-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0800231-098	C3 (NM6) S DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	16.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 568030)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 568031)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 568032)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 568033)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800232
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 8 Jan 2008
Order number	: ----			Date of issue	: 11 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800232 supersedes any previous reports with this reference. The completion date of analysis is 11 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800232 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 568948)								
HK0800232-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	8	14.6
HK0800232-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	14.1
EA/ED: Physical and Aggregate Properties (QC Lot: 568949)								
HK0800232-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0800232-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 568950)								
HK0800232-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	12	0.0
HK0800232-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	12.0
EA/ED: Physical and Aggregate Properties (QC Lot: 568951)								
HK0800232-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
HK0800232-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	12.2

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 568948)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 568949)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 568950)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 568951)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800273
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 9 Jan 2008
Order number	: ----			Date of issue	: 14 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800273 supersedes any previous reports with this reference. The completion date of analysis is 11 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800273 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 570162)								
HK0800273-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
HK0800273-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 570163)								
HK0800273-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	11.8
HK0800273-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	12.8
EA/ED: Physical and Aggregate Properties (QC Lot: 570164)								
HK0800273-058	MPB1 M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	14	12	16.8
HK0800273-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 570165)								
HK0800273-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	14	12	13.9
HK0800273-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	14	15.4

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 570162)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 570163)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 570164)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 570165)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800331
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 10 Jan 2008
Order number	: ----			Date of issue	: 15 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800331 supersedes any previous reports with this reference. The completion date of analysis is 14 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800331 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 570828)								
HK0800331-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	14.3
HK0800331-014	MPB2 S DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	15	14	11.7
EA/ED: Physical and Aggregate Properties (QC Lot: 570829)								
HK0800331-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	16	15	9.2
HK0800331-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 570830)								
HK0800331-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	23	24	0.0
HK0800331-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	13	12	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 570831)								
HK0800331-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	14	12	0.0
HK0800331-100	C3 (NM6) M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	17	18	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 570828)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 570829)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 570830)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 570831)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800367
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 11 Jan 2008
Order number	: ----			Date of issue	: 16 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800367 supersedes any previous reports with this reference. The completion date of analysis is 16 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800367 :
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.
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 573367)								
HK0800367-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
HK0800367-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 573368)								
HK0800367-028	IMO2 M DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
HK0800367-049	MP S MF	EA025: Suspended Solids (SS)	----	1	mg/L	24	23	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 573369)								
HK0800367-060	MPB1 B DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	9	25.1
HK0800367-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	18	19	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 573370)								
HK0800367-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	11	20.9
HK0800367-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	14	15	8.3

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 573367)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 573368)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	91.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 573369)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	88.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 573370)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800370
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 12 Jan 2008
Order number	: ----			Date of issue	: 16 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800370 supersedes any previous reports with this reference. The completion date of analysis is 14 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800370 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 571964)								
HK0800370-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
HK0800370-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 571965)								
HK0800370-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
HK0800370-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	10	21.1
EA/ED: Physical and Aggregate Properties (QC Lot: 571966)								
HK0800370-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	19	17	10.5
HK0800370-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	7	21.6
EA/ED: Physical and Aggregate Properties (QC Lot: 571967)								
HK0800370-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	32	32	0.0
HK0800370-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	25	24	4.1

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 571964)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 571965)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	87.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 571966)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 571967)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800385
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 13 Jan 2008
Order number	: ----			Date of issue	: 18 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800385 supersedes any previous reports with this reference. The completion date of analysis is 17 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800385 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 572283)								
HK0800385-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	16	15	0.0
HK0800385-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	15	14	9.5
EA/ED: Physical and Aggregate Properties (QC Lot: 572284)								
HK0800385-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	16	16	0.0
HK0800385-046	C2 (NM5) M DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	11	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 572285)								
HK0800385-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	14	16.5
HK0800385-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	12	21.5
EA/ED: Physical and Aggregate Properties (QC Lot: 572286)								
HK0800385-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	39	39	0.0
HK0800385-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	16	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 572283)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 572284)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	92.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 572285)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 572286)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800641
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 14 Jan 2008
Order number	: ----			Date of issue	: 18 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 76
Site	: ----				- Analysed : 76

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800641 supersedes any previous reports with this reference. The completion date of analysis is 17 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800641 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 574275)								
HK0800641-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	10.4
HK0800641-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	17.0
EA/ED: Physical and Aggregate Properties (QC Lot: 574276)								
HK0800641-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	22	22	0.0
HK0800641-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 574277)								
HK0800641-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	10	0.0
HK0800641-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	14.3
EA/ED: Physical and Aggregate Properties (QC Lot: 574278)								
HK0800641-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	15	33.2
HK0800641-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	20.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 574275)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 574276)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 574277)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	90.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 574278)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800640
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 15 Jan 2008
Order number	: ----			Date of issue	: 19 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800640 supersedes any previous reports with this reference. The completion date of analysis is 18 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800640 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 574288)								
HK0800640-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	10	0.0
HK0800640-014	MPB2 S DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 574289)								
HK0800640-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
HK0800640-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 574290)								
HK0800640-058	MPB1 M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	8	0.0
HK0800640-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 574291)								
HK0800640-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	0.0
HK0800640-100	C3 (NM6) M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 574288)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 574289)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 574290)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 574291)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800749
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 16 Jan 2008
Order number	: ----			Date of issue	: 21 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800749 supersedes any previous reports with this reference. The completion date of analysis is 18 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800749 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 575212)								
HK0800749-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
HK0800749-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	16.4
EA/ED: Physical and Aggregate Properties (QC Lot: 575213)								
HK0800749-024	IMO1 B DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
HK0800749-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 575214)								
HK0800749-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	13.2
HK0800749-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 575215)								
HK0800749-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	12.6
HK0800749-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 575212)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 575213)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 575214)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 575215)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800814
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 17 Jan 2008
Order number	: ----			Date of issue	: 21 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800814 supersedes any previous reports with this reference. The completion date of analysis is 19 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800814 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 576195)								
HK0800814-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	3	0.0
HK0800814-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 576196)								
HK0800814-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
HK0800814-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 576197)								
HK0800814-058	MPB1 M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0800814-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	4	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 576198)								
HK0800814-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0800814-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	4	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 576195)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 576196)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 576197)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 576198)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800813
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 18 Jan 2008
Order number	: ----			Date of issue	: 23 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800813 supersedes any previous reports with this reference. The completion date of analysis is 21 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800813 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 577113)								
HK0800813-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0800813-014	MPB2 S DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577114)								
HK0800813-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	0.0
HK0800813-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577115)								
HK0800813-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
HK0800813-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577116)								
HK0800813-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0800813-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 577113)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577114)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577115)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577116)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800920
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 19 Jan 2008
Order number	: ----			Date of issue	: 23 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 74
Site	: ----				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800920 supersedes any previous reports with this reference. The completion date of analysis is 23 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800920 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 577540)								
HK0800920-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
HK0800920-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577541)								
HK0800920-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	4	0.0
HK0800920-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577542)								
HK0800920-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	3	4	0.0
HK0800920-068	IMO1 S DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577543)								
HK0800920-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	6	18.2
HK0800920-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 577540)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577541)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577542)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577543)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	92.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0800935
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ----	Date received	: 20 Jan 2008
Order number	: ----			Date of issue	: 23 Jan 2008
C-O-C number	: ----			No. of samples	- Received : 100
Site	: ----				- Analysed : 100

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800935 supersedes any previous reports with this reference. The completion date of analysis is 21 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800935 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 577117)								
HK0800935-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	16.5
HK0800935-011	MPB1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577118)								
HK0800935-021	IMO1 M ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0800935-031	IMO3 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577119)								
HK0800935-041	IMO4 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	0.0
HK0800935-051	MP M MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577120)								
HK0800935-061	MPB2 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	5	0.0
HK0800935-072	IMO1 B DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 577121)								
HK0800935-081	IMO3 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
HK0800935-091	C1 (NM3) S MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	6	19.7

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 577117)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577118)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577119)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577120)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 577121)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	92.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801011
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 21 Jan 2008
Order number	: ---			Date of issue	: 24 Jan 2008
C-O-C number	: ---			No. of samples	- Received : 74
Site	: ---				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801011 supersedes any previous reports with this reference. The completion date of analysis is 24 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801011 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 578413)								
HK0801011-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	0.0
HK0801011-011	MPB1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 578414)								
HK0801011-014	MPB2 S DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
HK0801011-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	10.8
EA/ED: Physical and Aggregate Properties (QC Lot: 578415)								
HK0801011-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
HK0801011-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 578416)								
HK0801011-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	0.0
HK0801011-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	19.1

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 578413)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 578414)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 578415)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 578416)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801012
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 22 Jan 2008
Order number	: ---			Date of issue	: 25 Jan 2008
C-O-C number	: ---			No. of samples	- Received : 74
Site	: ---				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801012 supersedes any previous reports with this reference. The completion date of analysis is 24 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801012 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 579365)								
HK0801012-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
HK0801012-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 579366)								
HK0801012-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	15	15	0.0
HK0801012-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 579367)								
HK0801012-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	14.2
HK0801012-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	11	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 579368)								
HK0801012-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	14.5
HK0801012-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 579365)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 579366)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 579367)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 579368)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801057
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
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Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 23 Jan 2008
Order number	: ---			Date of issue	: 28 Jan 2008
C-O-C number	: ---			No. of samples	- Received : 74
Site	: ---				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801057 supersedes any previous reports with this reference. The completion date of analysis is 25 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801057 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 580390)								
HK0801057-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	13	8.8
HK0801057-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	13	12	7.8
EA/ED: Physical and Aggregate Properties (QC Lot: 580391)								
HK0801057-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	16	18	9.5
HK0801057-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	13	14	7.6
EA/ED: Physical and Aggregate Properties (QC Lot: 580392)								
HK0801057-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	12	0.0
HK0801057-062	MPB2 S DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 580393)								
HK0801057-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	15	14	10.4
HK0801057-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	14	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 580390)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580391)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580392)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580393)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801058
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 24 Jan 2008
Order number	: ---			Date of issue	: 29 Jan 2008
C-O-C number	: ---			No. of samples	- Received : 74
Site	: ---				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801058 supersedes any previous reports with this reference. The completion date of analysis is 29 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801058 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 580961)								
HK0801058-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	17	16	0.0
HK0801058-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	11	13.4
EA/ED: Physical and Aggregate Properties (QC Lot: 580962)								
HK0801058-024	IMO1 B DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	14	13	8.6
HK0801058-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	13	14	9.6
EA/ED: Physical and Aggregate Properties (QC Lot: 580963)								
HK0801058-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
HK0801058-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 580964)								
HK0801058-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	0.0
HK0801058-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	25	24	5.3

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 580961)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580962)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	96.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580963)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580964)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801155
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 25 Jan 2008
Order number	: ---			Date of issue	: 30 Jan 2008
C-O-C number	: ---			No. of samples	- Received : 74
Site	: ---				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801155 supersedes any previous reports with this reference. The completion date of analysis is 29 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801155 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 580987)								
HK0801155-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	14	15	8.1
HK0801155-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	13.6
EA/ED: Physical and Aggregate Properties (QC Lot: 580988)								
HK0801155-024	IMO1 B DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0801155-046	C2 (NM5) M DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 580989)								
HK0801155-058	MPB1 M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	10.3
HK0801155-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	12.7
EA/ED: Physical and Aggregate Properties (QC Lot: 580990)								
HK0801155-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	11	10	12.8
HK0801155-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	13	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 580987)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580988)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580989)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	95.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 580990)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	99.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801218
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 26 Jan 2008
Order number	: ---			Date of issue	: 31 Jan 2008
C-O-C number	: ---			No. of samples	- Received : 74
Site	: ---				- Analysed : 74

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801218 supersedes any previous reports with this reference. The completion date of analysis is 29 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801218 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 581652)								
HK0801218-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	18	15	15.3
HK0801218-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 581653)								
HK0801218-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	21	22	4.9
HK0801218-045	C2 (NM5) M ME	EA025: Suspended Solids (SS)	----	1	mg/L	24	28	17.3
EA/ED: Physical and Aggregate Properties (QC Lot: 581655)								
HK0801218-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	10	0.0
HK0801218-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	17	15	12.9
EA/ED: Physical and Aggregate Properties (QC Lot: 581657)								
HK0801218-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	19	17	10.5
HK0801218-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	15	16.8

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 581652)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 581653)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	104	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 581655)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	105	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 581657)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 4
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801320
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 27 Jan 2008
Order number	: ---			Date of issue	: 1 Feb 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 HK0801320 supersedes any previous reports with this reference. The completion date of analysis is 30 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801320 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 583038)								
HK0801320-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	10	25.3
HK0801320-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	15	20.7
EA/ED: Physical and Aggregate Properties (QC Lot: 583039)								
HK0801320-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	18	17	0.0
HK0801320-046	C2 (NM5) M DUP ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	19.5
EA/ED: Physical and Aggregate Properties (QC Lot: 583040)								
HK0801320-057	MPB1 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
HK0801320-067	IMO1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	10	12	13.8
EA/ED: Physical and Aggregate Properties (QC Lot: 583041)								
HK0801320-077	IMO2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	18	8.4
HK0801320-099	C3 (NM6) M MF	EA025: Suspended Solids (SS)	----	1	mg/L	12	11	9.2

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 583038)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583039)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583040)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	101	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583041)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801321
Address	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 28 Jan 2008
Order number	: ---			Date of issue	: 1 Feb 2008
C-O-C number	: ---			No. of samples	- Received : 102
Site	: ---				- Analysed : 102

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801321 supersedes any previous reports with this reference. The completion date of analysis is 1 Feb 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801321 : **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

Fung Lim Chee, Richard

Position

General Manager

Authorised results for:-

Inorganics



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 583416)								
HK0801321-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	0.0
HK0801321-011	MPB1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 583417)								
HK0801321-021	IMO1 M ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0801321-031	IMO3 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	12	13	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 583418)								
HK0801321-041	IMO4 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	8	0.0
HK0801321-051	MP M MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 583419)								
HK0801321-061	MPB2 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0801321-071	IMO1 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	16	17	8.3
EA/ED: Physical and Aggregate Properties (QC Lot: 583420)								
HK0801321-081	IMO3 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	15.3
HK0801321-091	C1 (NM3) S MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 583421)								
HK0801321-101	C3 (NM6) B MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 583416)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583417)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583418)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583419)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	94.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583420)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583421)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801323
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 29 Jan 2008
Order number	: ---			Date of issue	: 1 Feb 2008
C-O-C number	: ---			No. of samples	- Received : 98
Site	: ---				- Analysed : 98

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801323 supersedes any previous reports with this reference. The completion date of analysis is 31 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801323 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 583428)								
HK0801323-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
HK0801323-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	18.0
EA/ED: Physical and Aggregate Properties (QC Lot: 583429)								
HK0801323-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	9	0.0
HK0801323-033	IMO3 M ME	EA025: Suspended Solids (SS)	----	1	mg/L	10	8	14.8
EA/ED: Physical and Aggregate Properties (QC Lot: 583430)								
HK0801323-043	C2 (NM5) S ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0801323-055	MPB1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	9	9	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 583431)								
HK0801323-065	MPB2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	0.0
HK0801323-076	IMO2 M DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	16.1
EA/ED: Physical and Aggregate Properties (QC Lot: 583432)								
HK0801323-085	IMO4 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	7	8	0.0
HK0801323-096	C1 (NM3) B DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	13.6

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 583428)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583429)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583430)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583431)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.0	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 583432)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801386
Address	: 21/F, LINCOLN HOUSE, 979 KING`S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	Address	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
E-mail	: Karen.Lui@erm.com	E-mail	: Alice.Wong@alsenviro.com		
Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 30 Jan 2008
Order number	: ---			Date of issue	: 5 Feb 2008
C-O-C number	: ---			No. of samples	- Received : 98
Site	: ---				- Analysed : 98

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801386 supersedes any previous reports with this reference. The completion date of analysis is 1 Feb 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801386 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 584542)								
HK0801386-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	7	20.0
HK0801386-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 584544)								
HK0801386-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	5	0.0
HK0801386-033	IMO3 M ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 584546)								
HK0801386-041	IMO4 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
HK0801386-055	MPB1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	8	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 584547)								
HK0801386-065	MPB2 B MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	0.0
HK0801386-075	IMO2 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	7	17.9
EA/ED: Physical and Aggregate Properties (QC Lot: 584548)								
HK0801386-085	IMO4 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	5	6	0.0
HK0801386-095	C1 (NM3) B MF	EA025: Suspended Solids (SS)	----	1	mg/L	8	9	11.7

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 584542)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	97.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 584544)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	107	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 584546)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 584547)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	102	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 584548)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	108	----	85	115	----	----



CERTIFICATE OF ANALYSIS

Client	: ERM HONG KONG	Laboratory	: ALS Technichem (HK) Pty Ltd	Page	: 1 of 5
Contact	: MS KAREN LUI	Contact	: Alice Wong	Work Order	: HK0801453
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Telephone	: 2271 3000	Telephone	: +852 2610 1044		
Facsimile	: 2723 5660	Facsimile	: +852 2610 2021		
Project	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	Quote number	: ---	Date received	: 31 Jan 2008
Order number	: ---			Date of issue	: 5 Feb 2008
C-O-C number	: ---			No. of samples	- Received : 98
Site	: ---				- Analysed : 98

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0801453 supersedes any previous reports with this reference. The completion date of analysis is 4 Feb 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0801453 : **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

Fung Lim Chee, Richard

Position

General Manager

Authorised results for:-

Inorganics



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EA/ED: Physical and Aggregate Properties (QC Lot: 585016)								
HK0801453-001	MP S ME	EA025: Suspended Solids (SS)	----	1	mg/L	7	7	0.0
HK0801453-013	MPB2 S ME	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 585017)								
HK0801453-023	IMO1 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0801453-035	IMO3 B ME	EA025: Suspended Solids (SS)	----	1	mg/L	6	6	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 585018)								
HK0801453-043	C2 (NM5) S ME	EA025: Suspended Solids (SS)	----	1	mg/L	5	5	0.0
HK0801453-055	MPB1 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
EA/ED: Physical and Aggregate Properties (QC Lot: 585019)								
HK0801453-068	IMO1 S DUP MF	EA025: Suspended Solids (SS)	----	1	mg/L	3	3	0.0
HK0801453-075	IMO2 M MF	EA025: Suspended Solids (SS)	----	1	mg/L	14	13	7.2
EA/ED: Physical and Aggregate Properties (QC Lot: 585020)								
HK0801453-085	IMO4 S MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	4	0.0
HK0801453-095	C1 (NM3) B MF	EA025: Suspended Solids (SS)	----	1	mg/L	4	3	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EA/ED: Physical and Aggregate Properties (QCLot: 585016)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	106	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 585017)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	98.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 585018)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	93.5	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 585019)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----
EA/ED: Physical and Aggregate Properties (QCLot: 585020)											
EA025: Suspended Solids (SS)	----	2	mg/L	<2	20 mg/L	100	----	85	115	----	----

Annex G

Impact Water Quality Monitoring Results

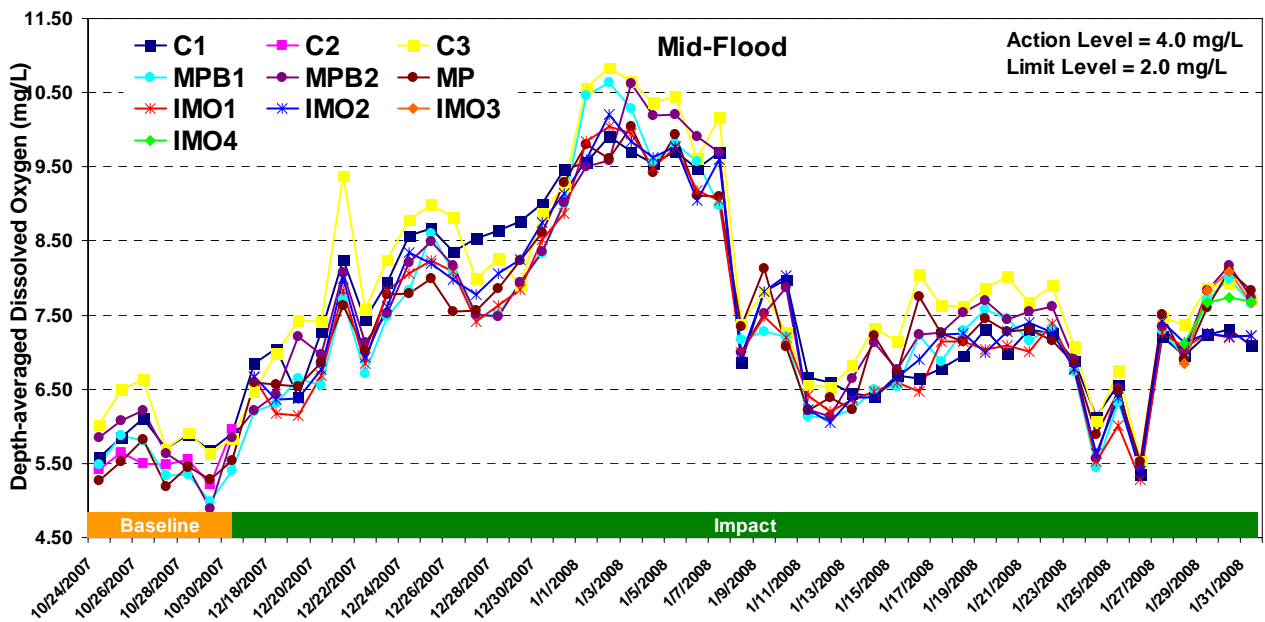
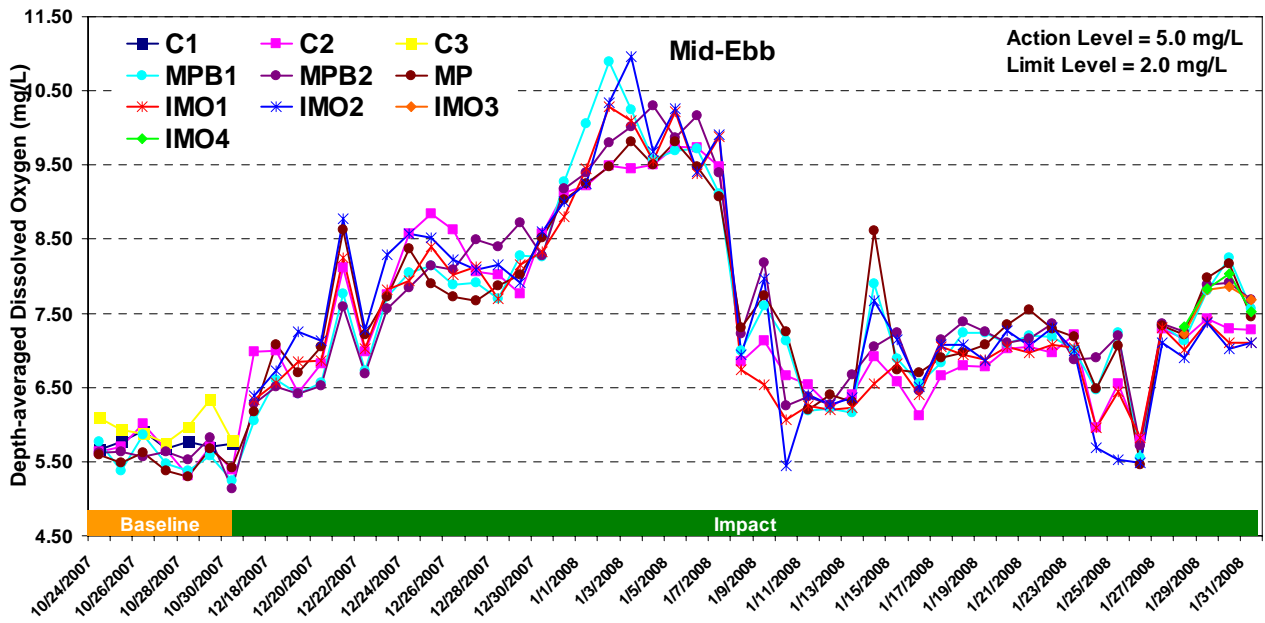


Figure G1 Dissolved oxygen concentration (depth-averaged) (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 January and 31 January 2008, and previous monitoring period between 24 October and 31 December 2007



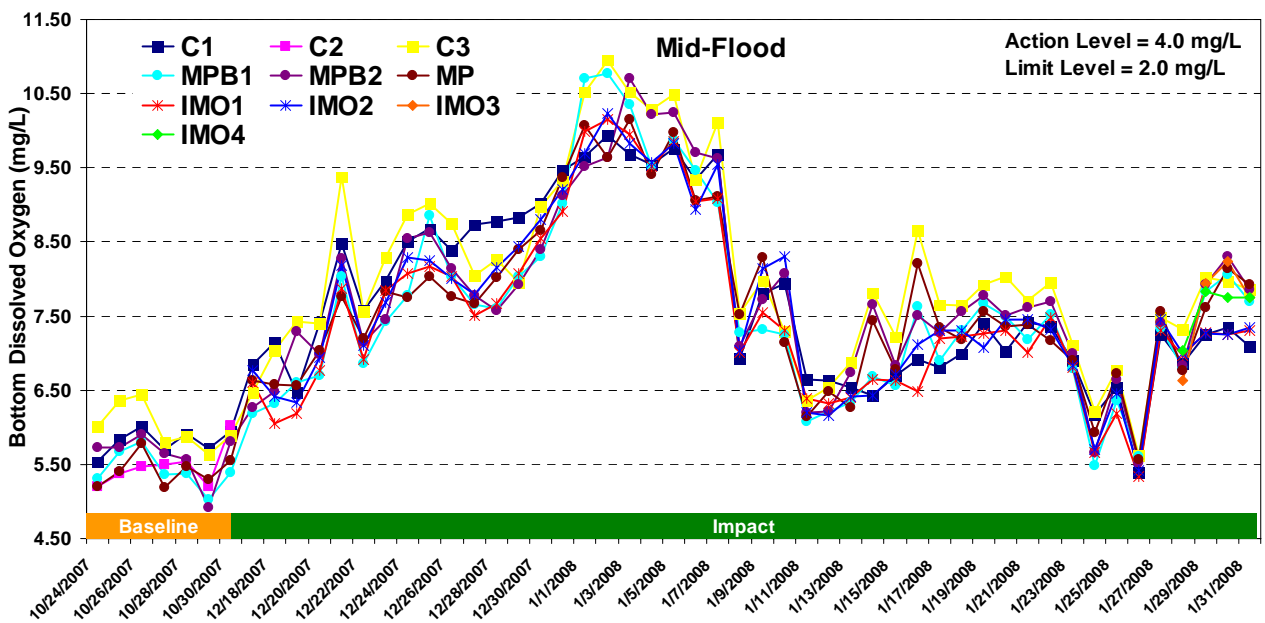
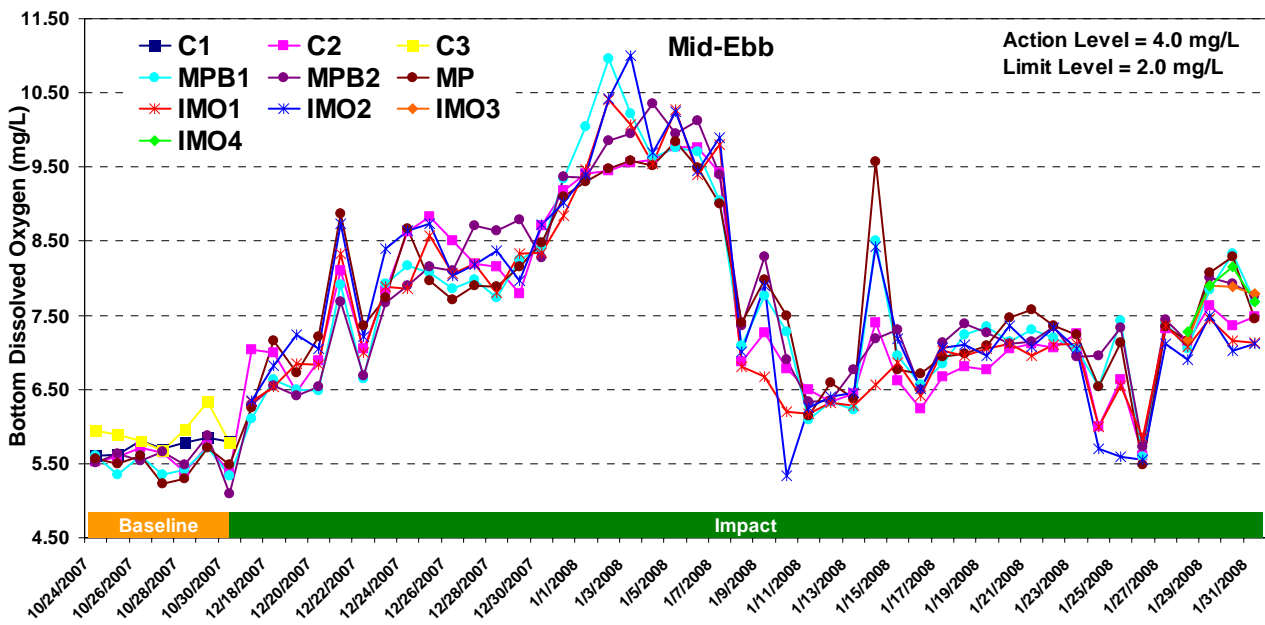


Figure G2 Dissolved oxygen concentration (bottom) (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 January and 31 January 2008, and previous monitoring period between 24 October and 31 December 2007



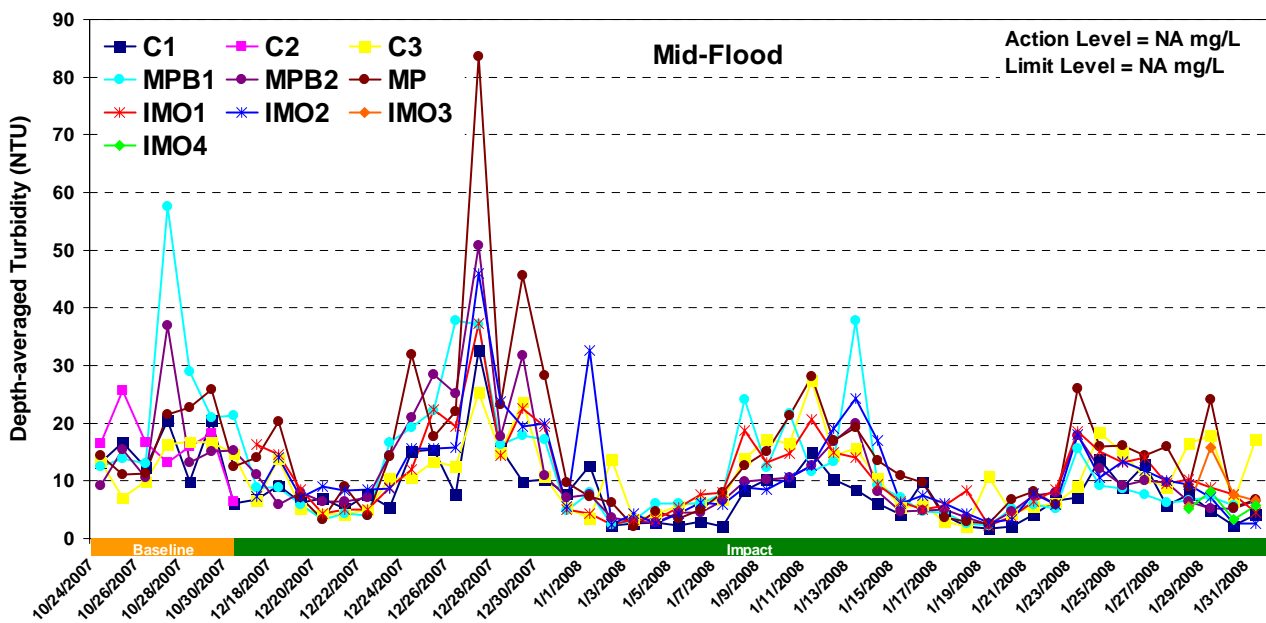
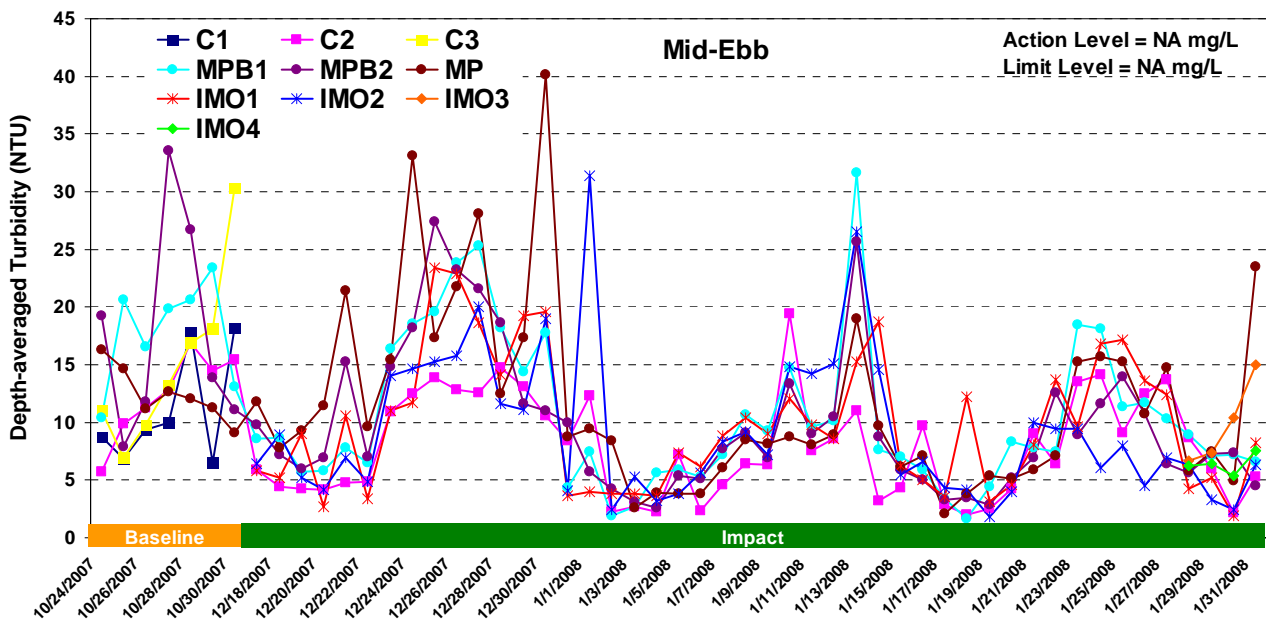


Figure G3 Depth-averaged turbidity (NTU) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 January and 31 January 2008, and previous monitoring period between 24 October and 31 December 2007

Ref: 0018105_Annex G_water graphs.doc



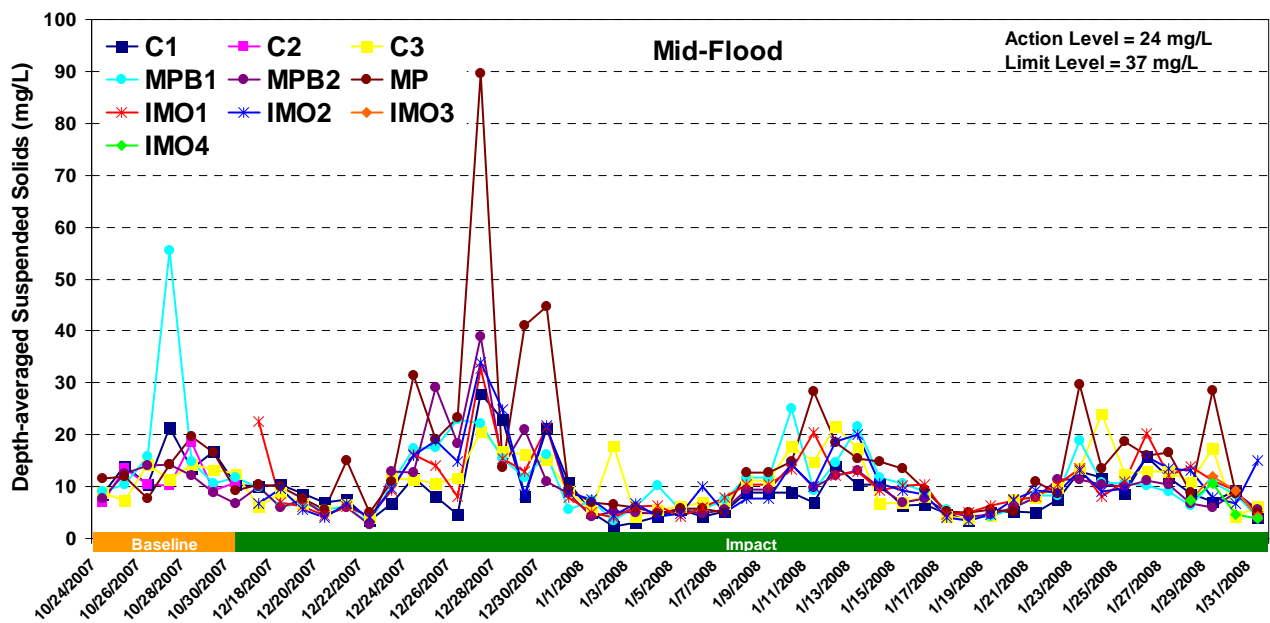
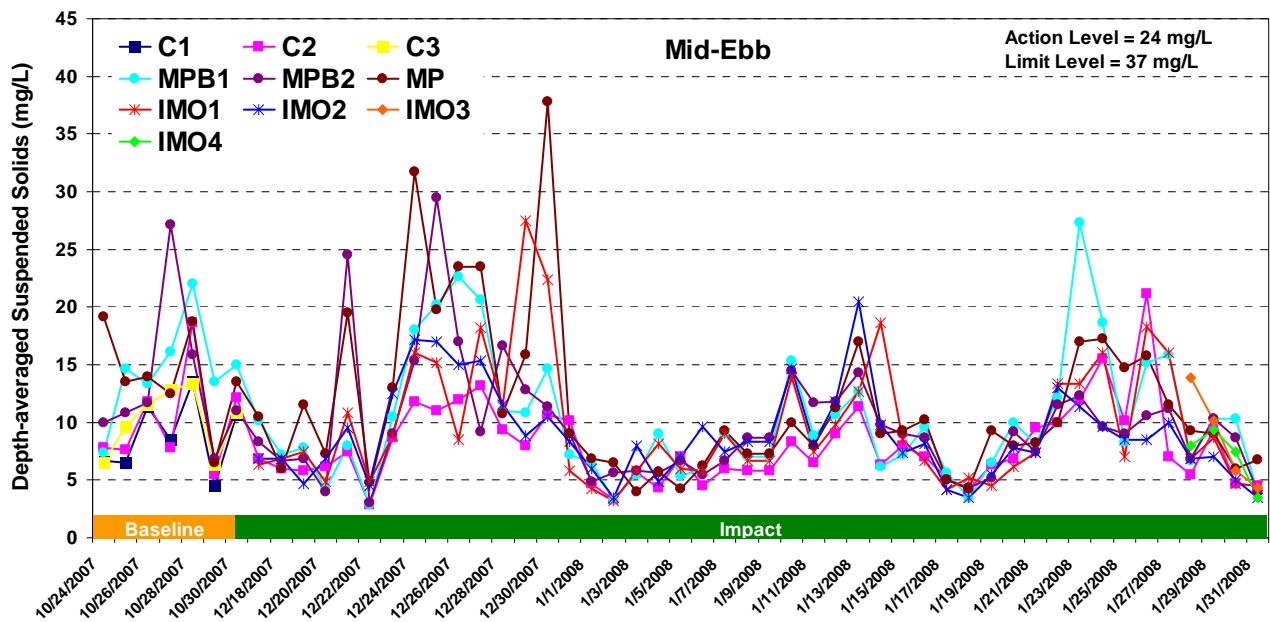


Figure G4 Depth-averaged suspended solids concentration (mg/L) of water samples from the eight sampling locations at mid-ebb and mid-flood between 1 January and 31 January 2008, and previous monitoring period between 24 October and 31 December 2007



Sampling Date	01/23/08
Weather & Ambient Temperature	Cloudy, 17C

Mid-Ebb

Station	C2 (NM5)							
Time (hh:mm)	11:50-11:52							
Water Depth (m)	20.2							
Monitoring Depth (m)	1.0		10.1		19.2			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	18.6	18.6	18.6	18.6	18.7	18.6	18.61	-
Salinity (ppt)	35.2	36.1	36.6	35.8	36.0	36.9	36.09	-
pH	7.9	8.0	7.9	7.9	7.9	7.9	7.91	-
D.O. Saturation (%)	95.8	95.3	94.8	95.0	95.9	96.0	95.47	-
D.O. (mg/L)	7.2	7.2	7.1	7.2	7.3	7.2	7.21	7.25
Turbidity (NTU)	5.3	5.5	14.3	13.2	22.1	20.7	13.52	-
SS (mg/L)	8.0	10.0	13.0	13.0	14.0	14.0	12.00	-
Remarks	No dredging works was observed.							

Station	IMO1						Co-ordinates	
Time (hh:mm)	12:20-12:22						Northing	Easting
Water Depth (m)	7.9						22.21.411	113.53.372
Monitoring Depth (m)	1.0		4.0		6.9			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	18.5	18.5	18.5	18.5	18.4	18.4	18.47	-
Salinity (ppt)	35.9	36.0	36.0	36.0	36.2	36.2	36.05	-
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.86	-
D.O. Saturation (%)	92.5	92.2	93.2	92.9	94.3	93.9	93.17	-
D.O. (mg/L)	7.0	7.0	7.0	7.0	7.1	7.10	7.04	7.12
Turbidity (NTU)	8.0	8.0	9.6	9.3	11.5	11.6	9.67	-
SS (mg/L)	10.0	13.0	11.0	13.0	16.0	17.0	13.33	-
Remarks	No dredging works was observed.							

Station	IMO2						Co-ordinates	
Time (hh:mm)	12:36-12:38						Northing	Easting
Water Depth (m)	8.7						22.21.135	113.53.604
Monitoring Depth (m)	1.0		4.4		7.7			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	18.6	18.5	18.5	18.5	18.3	18.2	18.42	-
Salinity (ppt)	35.1	35.1	36.3	36.5	37.0	37.0	36.17	-
pH	7.8	7.8	7.8	7.9	7.9	7.9	7.85	-
D.O. Saturation (%)	91.2	91.9	93.3	92.6	92.7	94.1	92.63	-
D.O. (mg/L)	6.9	6.9	7.0	7.0	7.0	7.11	7.00	7.05
Turbidity (NTU)	8.3	8.5	9.3	9.2	10.4	10.9	9.43	-
SS (mg/L)	12.0	13.0	12.0	14.0	8.0	9.0	11.33	-
Remarks	No dredging works was observed.							

Station	MPB1							
Time (hh:mm)	12:28-12:30							
Water Depth (m)	8.3							
Monitoring Depth (m)	1.0		4.2		7.3			
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom
Water Temperature (°C)	18.6	18.6	18.5	18.6	18.5	18.5	18.54	-
Salinity (ppt)	35.3	35.3	35.4	35.4	35.5	35.6	35.38	-
pH	7.9	7.8	7.9	7.8	7.9	7.8	7.85	-
D.O. Saturation (%)	91.9	92.2	92.1	92.6	92.7	93.1	92.43	-
D.O. (mg/L)	7.0	7.0	7.0	7.0	7.0	7.1	7.01	7.05
Turbidity (NTU)	15.6	16.5	17.6	18.8	21.9	20.6	18.50	-
SS (mg/L)	21.0	19.0	31.0	28.0	33.0	32.0	27.33	-
Remarks	No dredging works was observed.							

Station	MPB2							
Time (hh:mm)	12:45-12:47							
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)	18.6	18.5	18.4	18.5	18.3	18.3	18.42	-
Salinity (ppt)	36.1	36.1	36.4	36.4	36.9	36.8	36.43	-
pH	7.8	7.8	7.8	7.8	7.8	7.8	7.81	-
D.O. Saturation (%)	90.5	90.2	91.2	91.2	92.1	92.1	91.22	-
D.O. (mg/L)	6.8	6.8	6.9	6.9	6.9	7.0	6.88	6.95
Turbidity (NTU)	8.5	8.3	8.6	8.7	9.5	9.8	8.90	-
SS (mg/L)	13.0	12.0	12.0	13.0	10.0	14.0	12.33	-
Remarks	No dredging works was observed.							

Station	MP							
Time (hh:mm)	12:13-12:14							
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)	18.6	18.6	-	-	18.5	18.6	18.57	-
Salinity (ppt)	34.9	35.0	-	-	35.0	35.0	34.98	-
pH	7.8	7.8	-	-	7.8	7.8	7.81	-
D.O. Saturation (%)	94.6	93.5	-	-	94.6	95.5	94.55	-
D.O. (mg/L)	7.2	7.1	-	-	7.2	7.3	7.19	7.24
Turbidity (NTU)	9.3	9.8	-	-	20.3	21.7	15.28	-
SS (mg/L)	12.0	12.0	-	-	23.0	21.0	17.00	-
Remarks	No dredging works was observed.							

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level	Exceedance of Action Level	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	7.2	7.2	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	7.2	7.2	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	17.6	NA	N	N	N	N	Y	Y	N	N	N	N
SS (Depth-averaged)	24.0	37.0	15.6	15.6	N	N	N	N	Y	Y	N	N	N	N

Sampling Date	01/28/08
Weather & Ambient Temperature	Cloudy, 12C

Mid-Ebb

Station		C2 (NM5)							
Time (hh:mm)	15:52-15:54								
Water Depth (m)	20.8								
Monitoring Depth (m)	1.0		10.4		19.8				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	16.9	16.9	17.0	17.2	17.0	17.0	17.00	-	
Salinity (ppt)	37.1	37.2	37.2	37.5	37.5	37.1	37.25	-	
pH	7.9	8.0	8.0	7.9	8.0	8.0	7.96	-	
D.O. Saturation (%)	92.9	93.0	92.8	92.4	92.9	92.1	92.68	-	
D.O. (mg/L)	7.2	7.2	7.2	7.1	7.2	7.1	7.15	7.14	
Turbidity (NTU)	7.8	7.8	8.4	8.3	9.9	9.6	8.63	-	
SS (mg/L)	5.0	7.0	4.0	5.0	6.0	6.0	5.50	-	
Remarks	Dredging works was observed.								

Station		IMO1						Co-ordinates	
Time (hh:mm)	16:09-16:11						Northing	Easting	
Water Depth (m)	21.8						22.21.886	113.54.941	
Monitoring Depth (m)	1.0		10.9		20.8				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	17.9	17.8	17.2	17.3	17.3	17.2	17.45	-	
Salinity (ppt)	37.6	37.4	37.5	37.6	37.6	37.5	37.53	-	
pH	8.0	8.0	8.0	7.9	7.9	8.0	7.96	-	
D.O. Saturation (%)	92.6	91.0	91.6	90.5	91.8	92.4	91.65	-	
D.O. (mg/L)	7.0	6.9	7.0	6.9	7.0	7.10	7.01	7.07	
Turbidity (NTU)	3.0	3.3	4.8	4.2	5.0	5.2	4.25	-	
SS (mg/L)	9.0	8.0	6.0	8.0	5.0	5.0	6.83	-	
Remarks	Dredging works was observed.								

Station		IMO2						Co-ordinates	
Time (hh:mm)	16:16-16:18						Northing	Easting	
Water Depth (m)	21.2						22.21.615	113.55.448	
Monitoring Depth (m)	1.0		10.6		20.2				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	17.3	17.3	17.1	17.2	17.1	17.1	17.18	-	
Salinity (ppt)	37.6	37.6	37.7	37.6	37.6	37.5	37.60	-	
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.90	-	
D.O. Saturation (%)	90.1	89.9	90.0	90.2	89.8	89.8	89.97	-	
D.O. (mg/L)	6.9	6.9	6.9	6.9	6.9	6.90	6.90	6.90	
Turbidity (NTU)	4.6	4.8	6.9	6.4	7.9	7.5	6.35	-	
SS (mg/L)	9.0	7.0	6.0	4.0	8.0	7.0	6.83	-	
Remarks	Dredging works was observed.								

Station		IMO3						Co-ordinates	
Time (hh:mm)	15:18-15:19						Northing	Easting	
Water Depth (m)	10.2						22.21.274	113.53.877	
Monitoring Depth (m)	1.0		5.1		9.2				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	16.5	16.5	16.5	16.5	16.5	16.4	16.47	-	
Salinity (ppt)	37.4	37.4	37.6	37.6	37.7	37.7	37.57	-	
pH	7.9	7.9	7.9	8.0	8.0	7.9	7.91	-	
D.O. Saturation (%)	92.9	94.2	92.1	94.1	94.0	90.2	92.92	-	
D.O. (mg/L)	7.2	7.3	7.2	7.3	7.3	7.0	7.23	7.17	
Turbidity (NTU)	6.5	6.6	6.7	6.6	6.8	6.6	6.63	-	
SS (mg/L)	10.0	10.0	12.0	16.0	16.0	19.0	13.83	-	
Remarks	Dredging works was observed.								

Compliance with Action and Limit Level

Parameter	As in EM&A		C2*130%		IMO1		IMO2		IMO3		IMO4		MPB1		MPB2		MP	
	Action Level	Limit Level	Action Level	Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action	Exceedance of Limit Level	Exceedance of Action	Exceedance of Limit Level
DO (Bottom)	4.2	4.0	7.1	7.1	N	N	N	N	N	N	N	N	N	N	N	N	N	N
DO (Depth-averaged)	3.3	2.5	7.2	7.2	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Turbidity (Depth-averaged)	NA	NA	11.2	NA	N	N	N	N	N	N	N	N	N	N	N	N	N	N
SS (Depth-averaged)	24.0	37.0	7.2	7.2	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Station		IMO4						Co-ordinates	
Time (hh:mm)	15:11-15:12						Northing	Easting	
Water Depth (m)	9.8						22.21.027	113.53.951	
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)	16.5	16.5	16.4	16.4	16.4	16.4	16.45	-	
Salinity (ppt)	37.4	37.4	37.6	37.6	37.6	37.6	37.52	-	
pH	7.9	7.9	7.9	7.9	8.0	8.0	7.94	-	
D.O. Saturation (%)	93.8	94.8	93.4	94.8	94.9	92.0	93.95	-	
D.O. (mg/L)	7.3	7.4	7.3	7.4	7.4	7.2	7.32	7.28	
Turbidity (NTU)	5.5	4.9	6.6	6.1	7.0	7.1	6.20	-	
SS (mg/L)	10.0	13.0	6.0	7.0	6.0	6.0	16.00	-	
Remarks	Dredging works was observed.								

Station		MPB1							
Time (hh:mm)	15:26-15:27								
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)	16.7	16.7	16.6	16.5	16.5	16.6	16.59	-	
Salinity (ppt)	37.1	37.0	37.3	37.3	37.5	37.4	37.25	-	
pH	7.9	7.9	7.9	8.0	8.0	7.9	7.93	-	
D.O. Saturation (%)	93.2	92.0	92.9	91.0	88.9	92.4	91.73	-	
D.O. (mg/L)	7.3	7.2	7.2	7.1	6.9	7.2	7.14	7.05	
Turbidity (NTU)	8.4	8.4	8.8	8.7	9.8	9.4	8.92	-	
SS (mg/L)	8.0	10.0	5.0	6.0	5.0	6.0	6.67	-	
Remarks	Dredging works was observed.								

Station		MPB2							
Time (hh:mm)	15:04-15:05								
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)	16.7	16.6	16.5	16.6	16.4	16.5	16.56	-	
Salinity (ppt)	37.0	37.0	37.3	37.3	37.6	37.4	37.27	-	
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.91	-	
D.O. Saturation (%)	94.4	93.6	93.9	93.1	89.7	94.0	93.12	-	
D.O. (mg/L)	7.4	7.3	7.3	7.3	7.0	7.3	7.25	7.15	
Turbidity (NTU)	5.0	5.1	5.6	5.7	6.2	6.4	5.67	-	
SS (mg/L)	6.0	6.0	7.0	6.0	9.0	7.0	6.83	-	
Remarks	Dredging works was observed.								

Station		MP							
Time (hh:mm)	15:36-15:36								
Water Depth (m)	6.3								
Monitoring Depth (m)	1.0		3.1		5.3				
Trial	Trial 1	Trial 2	Trial 1	Trial 2	Trial 1	Trial 2	Depth-averaged	Bottom	
Water Temperature (°C)	16.6	16.6	16.6	16.6	16.6	16.6	16.55	-	
Salinity (ppt)	37.2	37.3	37.0	37.2	37.2	37.2	37.20	-	
pH	7.9	7.9	7.9	7.9	7.9	7.9	7.89	-	
D.O. Saturation (%)	92.6	93.5	93.4	92.0	90.5	93.2	92.53	-	
D.O. (mg/L)	7.2	7.3	7.3	7.2	7.1	7.3	7.21	7.16	
Turbidity (NTU)	5.8	5.7	5.8	5.5	6.2	5.8	5.80	-	
SS (mg/L)	9.0	11.0	-	-	7.0	10.0	9.25	-	
Remarks	Dredging works was observed.								

Annex H

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



CERTIFICATE OF ANALYSIS

<i>Client</i>	: ERM HONG KONG	<i>Laboratory</i>	: ALS Technichem (HK) Pty Ltd	<i>Page</i>	: 1 of 7
<i>Contact</i>	: MS KAREN LUI	<i>Contact</i>	: Alice Wong	<i>Work Order</i>	: HK0718591
<i>Address</i>	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST HONG KONG	<i>Address</i>	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong	<i>Amendment No.</i>	: 1
<i>E-mail</i>	: Karen.Lui@erm.com	<i>E-mail</i>	: Alice.Wong@alsenviro.com	<i>Date received</i>	: 26 Dec 2007
<i>Telephone</i>	: 2271 3000	<i>Telephone</i>	: +852 2610 1044	<i>Date of issue</i>	: 23 Jan 2008
<i>Facsimile</i>	: 2723 5660	<i>Facsimile</i>	: +852 2610 2021	<i>No. of samples</i>	- Received : 18
<i>Project</i>	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	<i>Quote number</i>	: ---		- Analysed : 18
<i>Order number</i>	: ---				
<i>C-O-C number</i>	: ---				
<i>Site</i>	: ---				

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0718591 supersedes any previous reports with this reference. The completion date of analysis is 14 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0718591 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
Water sample(s) analysed and reported on an as received basis.**

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

<u>Signatory</u>	<u>Position</u>	<u>Authorised results for:-</u>
Anh Ngoc Huynh	Senior Chemist	Organics



Analytical Results

				Client Sample ID :	MPB1 ME	MPB1 ME DUP	MPB2 ME	MPB2 ME DUP	MP ME
				Laboratory Sample ID :	HK0718591-001	HK0718591-002	HK0718591-003	HK0718591-004	HK0718591-005
				Sample Date / Time :	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]
Submatrix: MARINE WATER									
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<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	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<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	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<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	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<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	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<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	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<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	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<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	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<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	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<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	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<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	<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	<0.01
4.4'-DDE	72-55-9	0.01	µg/L	<0.01	<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	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate									
Surrogate control limits listed at end of this report.									
Decachlorobiphenyl	2051-24-3	0.1	%	103	98.2	99.9	98.1	102	
Tetrachlorometaxylene	877-09-8	0.1	%	104	98.8	97.8	96.5	102	
Dibutylchloroendate	1770-80-5	0.1	%	102	97.3	101	103	105	



Analytical Results

				Client Sample ID :	MP ME DUP	C2(NM5) ME	C2(NM5) ME DUP	MPB1 MF	MPB1 MF DUP
				Laboratory Sample ID :	HK0718591-006	HK0718591-007	HK0718591-008	HK0718591-009	HK0718591-010
				Sample Date / Time :	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]
Submatrix: MARINE WATER									
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<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	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<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	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<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	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<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	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<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	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<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	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<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	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<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	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<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	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<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	<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	<0.01
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<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	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate									
Surrogate control limits listed at end of this report.									
Decachlorobiphenyl	2051-24-3	0.1	%	106	101	102	102	101	98.5
Tetrachlorometaxylene	877-09-8	0.1	%	101	98.5	104	101	101	101
Dibutylchloroendate	1770-80-5	0.1	%	96.9	102	100	97.6	98.5	98.5



Analytical Results

				Client Sample ID :	MPB2 MF	MPB2 MF DUP	MP MF	MP MF DUP	C1(NM3) MF
				Laboratory Sample ID :	HK0718591-011	HK0718591-012	HK0718591-013	HK0718591-014	HK0718591-015
				Sample Date / Time :	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]
Submatrix: MARINE WATER									
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<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	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<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	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<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	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<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	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<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	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<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	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<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	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<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	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<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	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<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	<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	<0.01
4.4'-DDE	72-55-9	0.01	µg/L	<0.01	<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	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								Surrogate control limits listed at end of this report.	
Decachlorobiphenyl	2051-24-3	0.1	%	106	99.1	100	106	102	
Tetrachlorometaxylene	877-09-8	0.1	%	100	102	96.8	99.7	103	
Dibutylchloroendate	1770-80-5	0.1	%	101	102	102	96.2	100	



Analytical Results

				Client Sample ID :	C1(NM3) MF DUP	C3(NM6) MF	C3(NM6) MF DUP		
				Laboratory Sample ID :	HK0718591-016	HK0718591-017	HK0718591-018		
				Sample Date / Time :	[26 Dec 2007]	[26 Dec 2007]	[26 Dec 2007]		
				Submatrix: MARINE WATER					
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<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		
PCB 28	7012-37-5	0.01	µg/L	<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		
PCB 44	41464-39-5	0.01	µg/L	<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		
PCB 101	37680-73-2	0.01	µg/L	<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		
PCB 149	38380-04-0	0.01	µg/L	<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		
PCB 153	35065-27-1	0.01	µg/L	<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		
PCB 126	57465-28-8	0.01	µg/L	<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		
PCB 128	38380-07-3	0.01	µg/L	<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		
PCB 180	35065-29-3	0.01	µg/L	<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		
PCB 170	35065-30-6	0.01	µg/L	<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		
EP-065B: Organochlorine Pesticides									
4.4'-DDT	50-29-3	0.01	µg/L	<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		
4.4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01		
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate									
Surrogate control limits listed at end of this report.									
Decachlorobiphenyl	2051-24-3	0.1	%	102	97.2	102			
Tetrachlorometaxylene	877-09-8	0.1	%	98.2	101	96.0			
Dibutylchloroendate	1770-80-5	0.1	%	98.1	104	97.8			



Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
EP-065A: PCB Single Congeners (QC Lot: 564543)								
HK0718591-001	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 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
EP-065B: Organochlorine Pesticides (QC Lot: 564543)								
HK0718591-001	MPB1 ME	4,4'-DDT	50-29-3	0.01	µg/L	<0.01	<0.01	0.0

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

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
EP-065A: PCB Single Congeners (QCLot: 564543)											
PCB 8	34883-43-7	0.01	µg/L	<0.01	10 µg/L	98.2	----	50	130	----	----
PCB 18	37680-65-2	0.01	µg/L	<0.01	10 µg/L	108	----	50	130	----	----
PCB 28	7012-37-5	0.01	µg/L	<0.01	10 µg/L	108	----	50	130	----	----
PCB 52	35693-99-3	0.01	µg/L	<0.01	10 µg/L	95.8	----	50	130	----	----
PCB 44	41464-39-5	0.01	µg/L	<0.01	10 µg/L	105	----	50	130	----	----
PCB 66	32598-10-0	0.01	µg/L	<0.01	10 µg/L	98.8	----	50	130	----	----
PCB 101	37680-73-2	0.01	µg/L	<0.01	10 µg/L	104	----	50	130	----	----
PCB 77	32598-13-3	0.01	µg/L	<0.01	10 µg/L	103	----	50	130	----	----
PCB 149	38380-04-0	0.01	µg/L	<0.01	10 µg/L	101	----	50	130	----	----



Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
					Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
		Method: Analysis Description	CAS number	LOR		Units	Result	SCS	DCS	Low	High
EP-065A: PCB Single Congeners (QCLot: 564543) - continued											
PCB 118	31508-00-6	0.01	µg/L	<0.01	10 µg/L	103	----	50	130	----	----
PCB 153	35065-27-1	0.01	µg/L	<0.01	10 µg/L	99.6	----	50	130	----	----
PCB 105	32598-14-4	0.01	µg/L	<0.01	10 µg/L	96.3	----	50	130	----	----
PCB 126	57465-28-8	0.01	µg/L	<0.01	10 µg/L	98.8	----	50	130	----	----
PCB 187	52663-68-0	0.01	µg/L	<0.01	10 µg/L	105	----	50	130	----	----
PCB 128	38380-07-3	0.01	µg/L	<0.01	10 µg/L	103	----	50	130	----	----
PCB 156	38380-08-4	0.01	µg/L	<0.01	10 µg/L	101	----	50	130	----	----
PCB 180	35065-29-3	0.01	µg/L	<0.01	10 µg/L	99.8	----	50	130	----	----
PCB 169	60044-26-0	0.01	µg/L	<0.01	10 µg/L	109	----	50	130	----	----
PCB 170	35065-30-6	0.01	µg/L	<0.01	10 µg/L	109	----	50	130	----	----
PCB 195	52663-78-2	0.01	µg/L	<0.01	10 µg/L	105	----	50	130	----	----
EP-065B: Organochlorine Pesticides (QCLot: 564543)											
4.4'-DDT	50-29-3	0.01	µg/L	<0.01	10 µg/L	Not Determined	----	50	130	----	----

Surrogate Control Limits

Submatrix Type: MARINE WATER

Method: Analysis Description	Units	Lower Limit	Upper Limit
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	%	50	130
Tetrachlorometaxylene	%	50	130
Dibutylchloredate	%	50	130



CERTIFICATE OF ANALYSIS

CONTACT: MS KAREN LUI
CLIENT: ERM HONG KONG
ADDRESS: 21/F., LINCOLN HOUSE,
979 KING'S ROAD, TAIKOO PLACE,
ISLAND EAST, HONG KONG
PROJECT: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

Batch: HK0718591
LABORATORY: HONG KONG
DATE RECEIVED: 26/12/2007
DATE OF ISSUE: 18/01/2008
SAMPLE TYPE: WATER
No. of SAMPLES: 12

COMMENTS


Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
PAHs was subcontracted and tested by ALS Sydney.
ALS Sydney details report was attached. The attached report contains a total of 13 pages.

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

Phone: 852-2610 1044
Fax: 852-2610 2021
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Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA
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Kuala Lumpur
Bogor

AMERICAS
Vancouver
Santiago
Amtofagasta
Lima

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Abbreviations: % SPK REC denotes percentage spike recovery
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery



CERTIFICATE OF ANALYSIS

Batch: HK0718591
Date of Issue: 18/01/2008
Client: ERM HONG KONG
Client Reference: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

ALS Sydney report is attached for the analysis of PAHs in water.
This attached report contains a total of 13 pages.

Sample Details

<i>ALS Lab ID</i>	<i>ALS Melbourne Lab ID</i>	<i>Client's Sample ID</i>	<i>Sampling Date</i>
HK0718591-1	ES0800433-1	MPB1 ME	26/12/2007
HK0718591-2	ES0800433-2	MPB1 ME DUP	26/12/2007
HK0718591-3	ES0800433-3	MPB2 ME	26/12/2007
HK0718591-4	ES0800433-4	MPB2 ME DUP	26/12/2007
HK0718591-5	ES0800433-5	MP ME	26/12/2007
HK0718591-6	ES0800433-6	MP ME DUP	26/12/2007
HK0718591-7	ES0800433-7	C2(NM5) ME	26/12/2007
HK0718591-8	ES0800433-8	C2(NM5) ME DUP	26/12/2007
HK0718591-9	ES0800433-9	MPB1 MF	26/12/2007
HK0718591-10	ES0800433-10	MPB1 MF DUP	26/12/2007
HK0718591-11	ES0800433-11	MPB2 MF	26/12/2007
HK0718591-12	ES0800433-12	MPB2 MF DUP	26/12/2007
HK0718591-13	ES0800433-13	MP MF	26/12/2007
HK0718591-14	ES0800433-14	MP MF DUP	26/12/2007
HK0718591-15	ES0800433-15	C1(NM3) MF	26/12/2007
HK0718591-16	ES0800433-16	C1(NM3) MF DUP	26/12/2007
HK0718591-17	ES0800433-17	C3(NM6) MF	26/12/2007
HK0718591-18	ES0800433-18	C3(NM6) MF DUP	26/12/2007



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: ES0800433	Page	: 1 of 8
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
Contact	: MS ALICE WONG	Contact	: Victor Kedicioglu
Address	: 11/F CHUNG SHUN KNITTING CNTR 1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alice.wong@alsenviro.com	E-mail	: Victor.Kedicioglu@alsenviro.com
Telephone	: +852 001585226101044	Telephone	: +61-2-8784 8555
Facsimile	: +852 26102021	Facsimile	: +61-2-8784 8500
Project	: MACAU PROJECT	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ---	Date Samples Received	: 07-JAN-2008
C-O-C number	: ---	Issue Date	: 18-JAN-2008
Sampler	: ---	No. of samples received	: 18
Site	: ---	No. of samples analysed	: 18
Quote number	: ---		

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



WORLD RECOGNISED
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
EDWANDY FADJAR	Senior Organic Chemist	Organics

Page : 3 of 8
Work Order : ES0800433
Client : ALS TECHNICHEM (HK)
Project : MACAU 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 performed, 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 insufficient 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 process purposes.

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

Page : 4 of 8
 Work Order : ES0800433
 Client : ALS TECHNICHEM (HK)
 Project : MACAU PROJECT



Analytical Results

Sub-Matrix: WATER

Client sample ID

Compound	CAS Number	LOR	Unit	HK0718591-1	HK0718591-2	HK0718591-3	HK0718591-4	HK0718591-5
				MPB1-ME	MPB1-ME DUP	MPB2-ME	MPB2-ME DUP	MP-ME
				26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00
Client sampling date / time				ES0800433-001	ES0800433-002	ES0800433-003	ES0800433-004	ES0800433-005
EP132B: Polynuclear Aromatic Hydrocarbons								
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	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/L	<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	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	79.0	85.6	86.4	76.9	79.8
Anthracene-d10	1719-06-8	0.1	%	94.4	97.3	95.9	86.2	90.4
4-Terphenyl-d14	1718-51-0	0.1	%	85.7	89.7	88.4	78.8	83.3

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 Work Order : ES0800433
 Client : ALS TECHNICHEM (HK)
 Project : MACAU PROJECT



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	HK0718591-6	HK0718591-7	HK0718591-8	HK0718591-9	HK0718591-10
				MP-ME DUP	C2 (NM5) - ME	C2 (NM5) - ME DUP	MPB1-MF	MPB1-MF DUP
				26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00
				ES0800433-006	ES0800433-007	ES0800433-008	ES0800433-009	ES0800433-010
EP132B: Polynuclear Aromatic Hydrocarbons								
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	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/L	<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	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	83.9	80.4	70.3	73.2	77.6
Anthracene-d10	1719-06-8	0.1	%	95.3	89.7	79.2	83.2	90.4
4-Terphenyl-d14	1718-51-0	0.1	%	97.4	92.7	80.5	86.2	93.0

Page : 6 of 8
 Work Order : ES0800433
 Client : ALS TECHNICHEM (HK)
 Project : MACAU PROJECT



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	HK0718591-11	HK0718591-12	HK0718591-13	HK0718591-14	HK0718591-15
				MPB2-MF	MPB2-MF DUP	MP-MF	MP-MF DUP	C1 (NM3) - MF
				26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00	26-DEC-2007 15:00
				ES0800433-011	ES0800433-012	ES0800433-013	ES0800433-014	ES0800433-015
EP132B: Polynuclear Aromatic Hydrocarbons								
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	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/L	<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	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	83.3	76.8	77.8	84.1	76.2
Anthracene-d10	1719-06-8	0.1	%	96.0	88.8	89.0	93.0	89.2
4-Terphenyl-d14	1718-51-0	0.1	%	99.2	92.3	93.2	95.3	90.3

Page : 7 of 8
 Work Order : ES0800433
 Client : ALS TECHNICHEM (HK)
 Project : MACAU PROJECT



Analytical Results

Sub-Matrix: WATER

Client sample ID

HK0718591-16
C1 (NM3) - MF DUP

HK0718591-17
C3 (NM60 - MF

HK0718591-18
C3 (NM60 - MF DUP

Client sampling date / time

26-DEC-2007 15:00

26-DEC-2007 15:00

26-DEC-2007 15:00

Compound	CAS Number	LOR	Unit	ES0800433-016	ES0800433-017	ES0800433-018	----	----
EP132B: Polynuclear Aromatic Hydrocarbons								
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	----	----
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Acenaphthene	83-32-9	0.1	µg/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	<0.1	<0.1	----	----
Benzo(a)anthracene	56-55-3	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Benzo(a)pyrene	50-32-8	0.05	µg/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	<0.1	<0.1	<0.1	----	----
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Fluorene	86-73-7	0.1	µg/L	<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	----	----
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	----	----
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	----	----
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	----	----
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	68.6	68.3	73.3	----	----
Anthracene-d10	1719-06-8	0.1	%	80.0	79.9	88.8	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	81.9	82.2	92.4	----	----

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Work Order : ES0800433
Client : ALS TECHNICHEM (HK)
Project : MACAU PROJECT



Surrogate Control Limits

Sub-Matrix: WATER

Compound	CAS Number	Recovery Limits (%)	
		Low	High
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141



Environmental Division

QUALITY CONTROL REPORT

Work Order	: ES0800433	Page	: 1 of 5
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
Contact	: MS ALICE WONG	Contact	: Victor Kedicioglu
Address	: 11/F CHUNG SHUN KNITTING CNTR 1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: alice.wong@alsenviro.com	E-mail	: Victor.Kedicioglu@alsenviro.com
Telephone	: +852 001585226101044	Telephone	: +61-2-8784 8555
Facsimile	: +852 26102021	Facsimile	: +61-2-8784 8500
Project	: MACAU PROJECT	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ---	Date Samples Received	: 07-JAN-2008
C-O-C number	: ---	Issue Date	: 18-JAN-2008
Sampler	: ---	No. of samples received	: 18
Order number	: ---	No. of samples analysed	: 18
Quote number	: ---		

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:

- 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.

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.

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
EDWANDY FADJAR	Senior Organic Chemist	Organics

Environmental Division Sydney

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Page : 2 of 5
Work Order : ES0800433
Client : ALS TECHNICHEM (HK)
Project : MACAU 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 performed, 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 insufficient 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 : 3 of 5
Work Order : ES0800433
Client : ALS TECHNICHEM (HK)
Project : MACAU 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.**



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 (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: Compound	CAS Number	Method Blank (MB) Report			Laboratory Control Spike (LCS) Report				
		LOR	Unit	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						LCS	Low	High	
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 572214)									
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	2 µg/L	101	65.8	121	
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	2 µg/L	95.1	67.7	112	
EP132: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	2 µg/L	98.3	11.6	146	
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	2 µg/L	99.5	73.2	111	
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	2 µg/L	107	72.4	112	
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	2 µg/L	102	73.4	113	
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	2 µg/L	104	73.6	114	
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	99.8	75.2	117	
EP132: Benzo(b)fluoranthene	205-99-2	0.1	µg/L	<0.1	2 µg/L	110	71.4	119	
EP132: Benzo(e)pyrene	192-97-2	0.1	µg/L	<0.1	2 µg/L	102	75.3	118	
EP132: Benzo(g,h,i)perylene	191-24-2	0.1	µg/L	<0.1	2 µg/L	108	66.6	121	
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	2 µg/L	86.2	74.8	118	
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	2 µg/L	104	69.6	120	
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	2 µg/L	105	47.4	131	
EP132: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	2 µg/L	103	71.5	117	
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	2 µg/L	101	74.8	117	
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	2 µg/L	101	72.9	114	
EP132: Indeno(1,2,3-cd)pyrene	193-39-5	0.1	µg/L	<0.1	2 µg/L	106	67.8	119	
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	20 µg/L	97.8	53.6	131	
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	2 µg/L	98.2	68.3	116	
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	2 µg/L	100	68	122	
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	2 µg/L	104	74.8	112	
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	2 µg/L	101	75.1	117	



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.**



CERTIFICATE OF ANALYSIS

<i>Client</i>	: ERM HONG KONG	<i>Laboratory</i>	: ALS Technichem (HK) Pty Ltd	<i>Page</i>	: 1 of 6
<i>Contact</i>	: MS KAREN LUI	<i>Contact</i>	: Alice Wong	<i>Work Order</i>	: HK0800307
<i>Address</i>	: 21/F, LINCOLN HOUSE, 979 KING'S ROAD, TAIKOO PLACE, ISLAND EAST, QUARRY BAY HONG KONG	<i>Address</i>	: 11/F., Chung Shun Knitting Centre, 1 - 3 Wing Yip Street, Kwai Chung, N.T., Hong Kong		
<i>E-mail</i>	: Karen.Lui@erm.com	<i>E-mail</i>	: Alice.Wong@alsenviro.com		
<i>Telephone</i>	: 2271 3000	<i>Telephone</i>	: +852 2610 1044		
<i>Facsimile</i>	: 2723 5660	<i>Facsimile</i>	: +852 2610 2021		
<i>Project</i>	: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY	<i>Quote number</i>	: ---	<i>Date received</i>	: 9 Jan 2008
<i>Order number</i>	: ---			<i>Date of issue</i>	: 30 Jan 2008
<i>C-O-C number</i>	: ---			<i>No. of samples</i>	- Received : 18
<i>Site</i>	: ---				- Analysed : 18

Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0800307 supersedes any previous reports with this reference. The completion date of analysis is 18 Jan 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0800307 : **Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.**
Water sample(s) analysed and reported on an as received basis.

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

<u>Signatory</u>	<u>Position</u>	<u>Authorised results for:-</u>
Anh Ngoc Huynh	Senior Chemist	Organics



Analytical Results

				Client Sample ID :	MPB1 ME	MPB1 ME DUP	MPB2 ME	MPB2 ME DUP	MP ME
				Laboratory Sample ID :	HK0800307-001	HK0800307-002	HK0800307-003	HK0800307-004	HK0800307-005
				Sample Date / Time :	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]
Submatrix: MARINE WATER									
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<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	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<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	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<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	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<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	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<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	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<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	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<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	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<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	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<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	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<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	<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	<0.01
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<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	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate									
Surrogate control limits listed at end of this report.									
Decachlorobiphenyl	2051-24-3	0.1	%	105	96.7	103	104	103	103
Tetrachlorometaxylene	877-09-8	0.1	%	102	99.5	103	103	103	98.9
Dibutylchloroendate	1770-80-5	0.1	%	100	100	100	101	101	103



Analytical Results

				Client Sample ID :	MP ME DUP	C2 (NM5) ME	C2 (NM5) ME DUP	MPB1 MF	MPB1 MF DUP
				Laboratory Sample ID :	HK0800307-006	HK0800307-007	HK0800307-008	HK0800307-009	HK0800307-010
				Sample Date / Time :	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]
Submatrix: MARINE WATER									
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<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	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<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	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<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	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<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	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<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	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<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	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<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	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<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	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<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	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<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	<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	<0.01
4,4'-DDE	72-55-9	0.01	µg/L	<0.01	<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	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate									
Surrogate control limits listed at end of this report.									
Decachlorobiphenyl	2051-24-3	0.1	%	97.8	102	98.1	101	101	101
Tetrachlorometaxylene	877-09-8	0.1	%	102	104	98.7	101	100	100
Dibutylchlorendate	1770-80-5	0.1	%	99.6	98.4	103	97.9	101	101



Analytical Results

				Client Sample ID :	MPB2 MF	MPB2 MF DUP	MP MF	MP MF DUP	C1 (NM3) MF
				Laboratory Sample ID :	HK0800307-011	HK0800307-012	HK0800307-013	HK0800307-014	HK0800307-015
				Sample Date / Time :	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]
Submatrix: MARINE WATER									
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<0.01	<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	<0.01
PCB 28	7012-37-5	0.01	µg/L	<0.01	<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	<0.01
PCB 44	41464-39-5	0.01	µg/L	<0.01	<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	<0.01
PCB 101	37680-73-2	0.01	µg/L	<0.01	<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	<0.01
PCB 149	38380-04-0	0.01	µg/L	<0.01	<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	<0.01
PCB 153	35065-27-1	0.01	µg/L	<0.01	<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	<0.01
PCB 126	57465-28-8	0.01	µg/L	<0.01	<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	<0.01
PCB 128	38380-07-3	0.01	µg/L	<0.01	<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	<0.01
PCB 180	35065-29-3	0.01	µg/L	<0.01	<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	<0.01
PCB 170	35065-30-6	0.01	µg/L	<0.01	<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	<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	<0.01
4.4'-DDE	72-55-9	0.01	µg/L	<0.01	<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	<0.01
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate								Surrogate control limits listed at end of this report.	
Decachlorobiphenyl	2051-24-3	0.1	%	101	100	106	103	96.0	
Tetrachlorometaxylene	877-09-8	0.1	%	101	102	104	102	101	
Dibutylchloroendate	1770-80-5	0.1	%	97.0	105	104	103	97.9	



Analytical Results

				Client Sample ID :	C1 (NM3) MF DUP	C3 (NM6) MF	C3 (NM6) MF DUP		
				Laboratory Sample ID :	HK0800307-016	HK0800307-017	HK0800307-018		
				Sample Date / Time :	[9 Jan 2008]	[9 Jan 2008]	[9 Jan 2008]		
Submatrix: MARINE WATER									
Method: Analysis Description	CAS number	LOR	Units						
EP-065A: PCB Single Congeners									
PCB 8	34883-43-7	0.01	µg/L	<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		
PCB 28	7012-37-5	0.01	µg/L	<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		
PCB 44	41464-39-5	0.01	µg/L	<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		
PCB 101	37680-73-2	0.01	µg/L	<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		
PCB 149	38380-04-0	0.01	µg/L	<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		
PCB 153	35065-27-1	0.01	µg/L	<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		
PCB 126	57465-28-8	0.01	µg/L	<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		
PCB 128	38380-07-3	0.01	µg/L	<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		
PCB 180	35065-29-3	0.01	µg/L	<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		
PCB 170	35065-30-6	0.01	µg/L	<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		
EP-065B: Organochlorine Pesticides									
4.4'-DDT	50-29-3	0.01	µg/L	<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		
4.4'-DDD	72-54-8	0.01	µg/L	<0.01	<0.01	<0.01	<0.01		
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate									
Surrogate control limits listed at end of this report.									
Decachlorobiphenyl	2051-24-3	0.1	%	103	99.1	103	103		
Tetrachlorometaxylene	877-09-8	0.1	%	104	97.0	104	98.8		
Dibutylchloroendate	1770-80-5	0.1	%	103	105	103	102		



Surrogate Control Limits

Submatrix Type: MARINE WATER

<i>Method: Analysis Description</i>	<i>Units</i>	<i>Lower Limit</i>	<i>Upper Limit</i>
EP-065S: PCB Congeners and Organochlorine Pesticides Surrogate			
Decachlorobiphenyl	%		
Tetrachlorometaxylene	%		
Dibutylchlorendate	%		



CERTIFICATE OF ANALYSIS

CONTACT: MS KAREN LUI
CLIENT: ERM HONG KONG
ADDRESS: 21/F., LINCOLN HOUSE,
979 KING'S ROAD, TAIKOO PLACE,
ISLAND EAST, HONG KONG
PROJECT: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

Batch: HK0800307
LABORATORY: HONG KONG
DATE RECEIVED: 09/01/2008
DATE OF ISSUE: 30/01/2008
SAMPLE TYPE: WATER
No. of SAMPLES: 12

COMMENTS

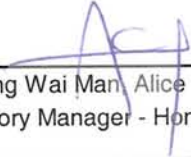
Sample(s) were picked up from client by ALS Technichem (HK) staff in a chilled condition.
PAHs was subcontracted and tested by ALS Sydney.
ALS Sydney details report was attached. The attached report contains a total of 15 pages.

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

Phone: 852-2610 1044
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Ms Wong Wai Man, Alice
Laboratory Manager - Hong Kong

Other ALS Environmental Laboratories

AUSTRALIA

Brisbane
Melbourne
Sydney
Newcastle

Hong Kong
Singapore
Kuala Lumpur
Bogor

AMERICAS

Vancouver
Santiago
Amtofagasta
Lima

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Abbreviations: % SPK REC denotes percentage spike recovery
CHK denotes duplicate check sample
LOR denotes limit of reporting
LCS % REC denotes Laboratory Control Sample percentage recovery



CERTIFICATE OF ANALYSIS

Batch: HK0800307
Date of Issue: 30/01/2008
Client: ERM HONG KONG
Client Reference: EM&A FOR THE PERMANENT AVIATION FUEL FACILITY

ALS Sydney report is attached for the analysis of PAHs in water.
This attached report contains a total of 15 pages.

Sample Details

<i>ALS Lab ID</i>	<i>ALS Melbourne Lab ID</i>	<i>Client's Sample ID</i>	<i>Sampling Date</i>
HK0800307-1	ES0800673-1	MPB1 ME	09/01/2008
HK0800307-2	ES0800673-2	MPB1 ME DUP	09/01/2008
HK0800307-3	ES0800673-3	MPB2 ME	09/01/2008
HK0800307-4	ES0800673-4	MPB2 ME DUP	09/01/2008
HK0800307-5	ES0800673-5	MP ME	09/01/2008
HK0800307-6	ES0800673-6	MP ME DUP	09/01/2008
HK0800307-7	ES0800673-7	C2(NM5) ME	09/01/2008
HK0800307-8	ES0800673-8	C2(NM5) ME DUP	09/01/2008
HK0800307-9	ES0800673-9	MPB1 MF	09/01/2008
HK0800307-10	ES0800673-10	MPB1 MF DUP	09/01/2008
HK0800307-11	ES0800673-11	MPB2 MF	09/01/2008
HK0800307-12	ES0800673-12	MPB2 MF DUP	09/01/2008
HK0800307-13	ES0800673-13	MP MF	09/01/2008
HK0800307-14	ES0800673-14	MP MF DUP	09/01/2008
HK0800307-15	ES0800673-15	C1(NM3) MF	09/01/2008
HK0800307-16	ES0800673-16	C1(NM3) MF DUP	09/01/2008
HK0800307-17	ES0800673-17	C3(NM6) MF	09/01/2008
HK0800307-18	ES0800673-18	C3(NM6) MF DUP	09/01/2008



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: ES0800673	Page	: 1 of 8
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
Contact	: MS KERRY YUEN	Contact	: Victor Kedicioglu
Address	: 11/F CHUNG SHUN KNITTING CNTR 1-3 WING YIP STREET KWAI CHUNG, N.T HONG KONG HONG KONG	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: kerry.yuen@alsenviro.com	E-mail	: Victor.Kedicioglu@alsenviro.com
Telephone	: +852 001585226101044	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	: ---	Date Samples Received	: 18-JAN-2008
C-O-C number	: ---	Issue Date	: 30-JAN-2008
Sampler	: ---	No. of samples received	: 18
Site	: ---	No. of samples analysed	: 18
Quote number	: ---		

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



WORLD RECOGNISED
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
EDWANDY FADJAR	Senior Organic Chemist	Organics

Page : 3 of 8
Work Order : ES0800673
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 performed, 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 insufficient 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 process purposes.

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

Page : 4 of 8
 Work Order : ES0800673
 Client : ALS TECHNICHEM (HK)
 Project : ----



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	HK0800307-1	HK0800307-2	HK0800307-3	HK0800307-4	HK0800307-5
				09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00
				ES0800673-001	ES0800673-002	ES0800673-003	ES0800673-004	ES0800673-005
EP132B: Polynuclear Aromatic Hydrocarbons								
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	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/L	<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	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	88.5	86.8	81.2	79.2	84.5
Anthracene-d10	1719-06-8	0.1	%	91.1	86.5	82.9	82.8	86.6
4-Terphenyl-d14	1718-51-0	0.1	%	97.8	86.5	88.2	88.0	93.5

Page : 5 of 8
 Work Order : ES0800673
 Client : ALS TECHNICHEM (HK)
 Project : ----



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	HK0800307-6	HK0800307-7	HK0800307-8	HK0800307-9	HK0800307-11
				09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00
				ES0800673-006	ES0800673-007	ES0800673-008	ES0800673-009	ES0800673-010
EP132B: Polynuclear Aromatic Hydrocarbons								
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	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/L	<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	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	76.3	76.8	78.6	80.8	82.4
Anthracene-d10	1719-06-8	0.1	%	77.6	87.9	90.3	90.3	91.9
4-Terphenyl-d14	1718-51-0	0.1	%	80.7	91.5	98.2	96.4	100

Page : 6 of 8
 Work Order : ES0800673
 Client : ALS TECHNICHEM (HK)
 Project : ----



Analytical Results

Sub-Matrix: WATER

Client sample ID

Client sampling date / time

Compound	CAS Number	LOR	Unit	HK0800307-12	HK0800307-14	HK0800307-15	HK0800307-17	HK0800307-18
				09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00
				ES0800673-011	ES0800673-012	ES0800673-013	ES0800673-014	ES0800673-015
EP132B: Polynuclear Aromatic Hydrocarbons								
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	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/L	<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	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	<0.1	<0.1
EP132T: Base/Neutral Extractable Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	74.6	77.1	60.5	75.1	84.2
Anthracene-d10	1719-06-8	0.1	%	79.9	87.3	66.1	87.2	97.4
4-Terphenyl-d14	1718-51-0	0.1	%	89.5	93.4	66.8	94.0	104



Analytical Results

Sub-Matrix: WATER

				Client sample ID	HK0800307-10	HK0800307-13	HK0800307-16	----	----
				Client sampling date / time	09-JAN-2008 15:00	09-JAN-2008 15:00	09-JAN-2008 15:00	----	----
Compound	CAS Number	LOR	Unit	ES0800673-016	ES0800673-017	ES0800673-018	----	----	----
EP132B: Polynuclear Aromatic Hydrocarbons									
3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	<0.1	<0.1	----	----	----
2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	<0.1	<0.1	----	----	----
7,12-Dimethylbenz(a)anthracene	57-97-6	0.1	µg/L	<0.1	<0.1	<0.1	----	----	----
Acenaphthene	83-32-9	0.1	µg/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	<0.1	<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	µg/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	<0.1	<0.1	<0.1	----	----	----
Fluoranthene	206-44-0	0.1	µg/L	<0.1	<0.1	<0.1	----	----	----
Fluorene	86-73-7	0.1	µg/L	<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	----	----	----
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	----	----	----
Phenanthrene	85-01-8	0.1	µg/L	<0.1	<0.1	<0.1	----	----	----
Pyrene	129-00-0	0.1	µg/L	<0.1	<0.1	<0.1	----	----	----
EP132T: Base/Neutral Extractable Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	75.5	72.8	77.8	----	----	----
Anthracene-d10	1719-06-8	0.1	%	82.3	75.7	84.2	----	----	----
4-Terphenyl-d14	1718-51-0	0.1	%	87.4	81.2	90.4	----	----	----

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Work Order : ES0800673
Client : ALS TECHNICHEM (HK)
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Surrogate Control Limits

Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP132T: Base/Neutral Extractable Surrogates			
2-Fluorobiphenyl	321-60-8	43	116
Anthracene-d10	1719-06-8	27	133
4-Terphenyl-d14	1718-51-0	33	141



Environmental Division

QUALITY CONTROL REPORT

Work Order	: ES0800673	Page	: 1 of 7
Client	: ALS TECHNICHEM (HK)	Laboratory	: Environmental Division Sydney
Contact	: MS KERRY YUEN	Contact	: Victor Kedicioglu
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Facsimile	: +852 26102021	Facsimile	: +61-2-8784 8500
Project	: ----	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----	Date Samples Received	: 18-JAN-2008
C-O-C number	: ----	Issue Date	: 30-JAN-2008
Sampler	: ----	No. of samples received	: 18
Order number	: ----	No. of samples analysed	: 18
Quote number	: ----		

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:

- 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



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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
EDWANDY FADJAR	Senior Organic Chemist	Organics

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Work Order : ES0800673
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 performed, 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 insufficient 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

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Work Order : ES0800673
Client : ALS TECHNICHEM (HK)
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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.**



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 (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: Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
						Result	LCS	Low	High
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 575484)									
EP132: 3-Methylcholanthrene	56-49-5	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 82.6	---- 65.8	---- 121	----
EP132: 2-Methylnaphthalene	91-57-6	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 88.1	---- 67.7	---- 112	----
EP132: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 88.4	---- 11.6	---- 146	----
EP132: Acenaphthene	83-32-9	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 90.9	---- 73.2	---- 111	----
EP132: Acenaphthylene	208-96-8	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 94.8	---- 72.4	---- 112	----
EP132: Anthracene	120-12-7	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 92.9	---- 73.4	---- 113	----
EP132: Benz(a)anthracene	56-55-3	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 89.6	---- 73.6	---- 114	----
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	91.5	75.2	117	----
EP132: Benzo(b)fluoranthene	205-99-2	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 98.5	---- 71.4	---- 119	----
EP132: Benzo(e)pyrene	192-97-2	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 86.9	---- 75.3	---- 118	----
EP132: Benzo(g,h,i)perylene	191-24-2	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 85.9	---- 66.6	---- 121	----
EP132: Benzo(k)fluoranthene	207-08-9	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 92.0	---- 74.8	---- 118	----
EP132: Chrysene	218-01-9	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 92.2	---- 69.6	---- 120	----
EP132: Coronene	191-07-1	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 88.3	---- 47.4	---- 131	----
EP132: Dibenz(a,h)anthracene	53-70-3	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 86.9	---- 71.5	---- 117	----
EP132: Fluoranthene	206-44-0	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 93.2	---- 74.8	---- 117	----
EP132: Fluorene	86-73-7	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 96.6	---- 72.9	---- 114	----
EP132: Indeno(1,2,3-cd)pyrene	193-39-5	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 85.3	---- 67.8	---- 119	----
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1 0.10	µg/L µg/L	<0.1 ----	---- 20 µg/L	---- 88.8	---- 53.6	---- 131	----
EP132: Naphthalene	91-20-3	0.1 0.10	µg/L µg/L	<0.1 ----	---- 2 µg/L	---- 89.4	---- 68.3	---- 116	----



Sub-Matrix: **WATER**

Method/Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
				Result		LCS	Low	High	
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 575484) - continued									
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	87.5	68	122	
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	93.6	74.8	112	
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	94.2	75.1	117	
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 578025)									
EP132: 3-Methylcholanthrene	56-49-5	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	86.1	65.8	121	
EP132: 2-Methylnaphthalene	91-57-6	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	88.8	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	87.5	11.6	146	
EP132: Acenaphthene	83-32-9	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	94.1	73.2	111	
EP132: Acenaphthylene	208-96-8	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	97.3	72.4	112	
EP132: Anthracene	120-12-7	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	94.1	73.4	113	
EP132: Benz(a)anthracene	56-55-3	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	89.9	73.6	114	
EP132: Benzo(a)pyrene	50-32-8	0.05	µg/L	<0.05	2 µg/L	94.8	75.2	117	
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	----	2 µg/L	87.9	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	92.4	66.6	121	
EP132: Benzo(k)fluoranthene	207-08-9	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	103	74.8	118	
EP132: Chrysene	218-01-9	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	94.4	69.6	120	
EP132: Coronene	191-07-1	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	88.7	47.4	131	
EP132: Dibenz(a,h)anthracene	53-70-3	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	93.7	71.5	117	
EP132: Fluoranthene	206-44-0	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	93.6	74.8	117	
EP132: Fluorene	86-73-7	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	97.9	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	89.3	67.8	119	

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 Client : ALS TECHNICHEM (HK)
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Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB)	Laboratory Control Spike (LCS) Report				
				Report	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)	
				Result		LCS	Low	High	
EP132B: Polynuclear Aromatic Hydrocarbons (QCLot: 578025) - continued									
EP132: N-2-Fluorenyl Acetamide	53-96-3	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	108	53.6	131	
EP132: Naphthalene	91-20-3	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	92.4	68.3	116	
EP132: Perylene	198-55-0	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	91.9	68	122	
EP132: Phenanthrene	85-01-8	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	92.1	74.8	112	
EP132: Pyrene	129-00-0	0.1	µg/L	<0.1	----	----	----	----	----
		0.10	µg/L	----	2 µg/L	95.8	75.1	117	

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Work Order : ES0800673
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 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.**

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