Appendix K

Sediment Quality Report

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Annexes

1 INTRODUCTION

Dredging of marine sediment is required for the laying of the twin pipelines and the sediments generated will require disposal in accordance with ETWB 34/2002. The nearest EPD Routine Monitoring stations (NS3, NS4 & NS6) to the proposed dredging works indicate that the sediment along the pipeline alignment may be contaminated (Category M) and require Tier III testing to determine the suitable disposal option (as required under ETWB 34/2002). A sediment test proposal, rationale for dredging and chemical / biological test proposal was previously submitted and agreed by the MFC and DEP.

2 SEDIMENT SAMPLING AND CHEMICAL ANALYSES

A plan showing the detailed location of dredging site and submarine pipelines alignment is provided in the Environmental Permit (EP-139/2002/A). Based on the EPD data, the sediments along the pipeline alignment may be contaminated. Based on the predicted level of low contamination along the pipeline alignment, ETWB 34/2002 requires a 200 x 200 m grid surface sample only although vertical profile was conducted to provide additional information. As the dredge area is only approximately 20-30m in width, a grid was not considered necessary and 14 core samples were collected for analysis along the pipeline alignment. The sampling locations were accurately located using GPS. The vibrocore sampling locations are positioned along the pipeline alignment (refer to *Figure 1*). The continuous vertical core collected samples at the seabed (0m), 0.9m down, 1.9m down, 2.9m down (for sampling locations MVA1, MVA2, MVA8 to MVA13 & MVA14 (TBT only)) and then at a further 3m down (for sampling locations MVA3 to MVA7) and the core penetrated to around 5.9m total depth. Dredging generally will be to 3m below the seabed except for the deep dredging where it will be to 6m below the seabed. Sufficient amount of sediment material for both chemical and biological testing was taken from each vibrocore. After Tier II chemical testing, sufficient sediment volume (6L) was stored at 4° C in the dark for higher tier testing in the event biological screening is required.

Chemical analyses of the contaminants stipulated in Table 1 (Appendix B) of ETWB 34/2002 were conducted by a HOKLAS-accredited laboratory (Lam Laboratories Limited). All chemical testing was conducted within the holding times stipulated in ETWB 34/2002. The sediment samples were obtained from the stations detailed above between 16 June 2006 to 24 June 2006 (the vibrocore logs and sampling coordinates are appended in *Annex A*).

3 RESULTS OF SEDIMENT CHEMICAL ANALYSES

Chemical analyses revealed that the organic contaminants (Total PCBs, low and high molecular weight PAHs and organomatallics (TBT)) were all below the respective analytical reporting limits (*Annex B*). Aside from lead, copper, mercury and arsenic, all contaminants were below the respective LCEL values (please refer to *Table 1* for a summary of the screening criteria and *Table 2* for a summary of the testing results). Lead exceeded the LCEL (category M) at one sampling depth for MVA2, copper exceeded the LCEL (category M) at two sampling depths for MVA1 and MVA 3, mercury exceeded the LCEL (category M) at one sampling depth for MVA1 and arsenic exceeded the LCEL at 14 sampling depths for MVA1 to MVA4 and MVA8 to MVA13. The sediment chemistry results showing

exceedances are highlighted below in *Table 2*. The full set of chemical analysis of contaminants is shown in *Annex B*.

The quality control data (comprising standard reference material, method blanks, batch duplicate and single control samples spiked with analytes of interest) are appended in *Annex B*. All the quality control data were within acceptable ranges and based on the information provide in the laboratory report, the data are considered to be acceptable.

Table 1 Criteria for Marine Sediment Quality Classification (ETWB 34/2002; Appendix A)

Contaminant	**Lower Chemical Exceedance Level (LCEL)**	**Upper Chemical Exceedance Level (UCEL)**
Metals (mg kg^{-1} dry wt.)		
Cadmium	1.5	4
Chromium	80	160
Copper	65	110
Mercury	0.5	1
Nickel[1]	40	40
Lead	75	110
Silver	1	2
Zinc	200	270
Metalloid (mg kg^{-1} dry wt.)		
Arsenic	12	42
Organics-PAHs (µg kg^{-1} dry wt.)		
Low Molecular Weight PAHs	550	3160
High Molecular Weight PAHs	1700	9600
Organics-non-PAHs (µg kg^{-1} dry wt.)		
Total PCBs	23	180
Organometallics (µg TBT L^{-1} in interstitial water)		
Tributyltin[1]	0.15	0.15

Note: [1]The contaminant level is considered to have exceeded the UCEL if it is greater than the value shown.

Table 2 Sediment Chemistry Results Showing Exceedances

Drill Hole No.	**Depth (m)**		**Contaminant**								
	From	**To**	**Cd**	**Cr**	**Cu**	**Ni**	**Pb**	**Zn**	**Hg**	**As**	**Ag**
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MVA1	0.00	0.20	0.18	43	**69**	25	69	100	0.19	12	0.42
MVA1	0.90	1.10	0.16	33	22	19	52	73	0.22	**17**	0.12
MVA1	1.70	1.90	0.14	29	12	18	32	62	**0.69**	**13**	<0.10
MVA1	2.90	3.10	0.09	18	6.2	10	22	33	0.07	7.3	0.19
MVA2	0.00	0.20	0.16	38	39	22	47	99	0.15	12	0.70
MVA2	0.90	1.10	0.15	33	24	20	46	71	0.22	**17**	0.12
MVA2	1.70	1.90	0.12	25	11	16	**84**	56	0.12	10	<0.10
MVA2	2.90	3.10	0.12	26	11	16	27	56	0.10	10	<0.10
MVA3	0.00	0.20	0.14	32	35	13	38	95	0.16	11	0.39
MVA3	0.90	1.10	0.19	49	**72**	26	66	120	0.22	**14**	0.41
MVA3	1.70	1.90	0.05	13	7.3	13	53	30	0.06	3.8	<0.10
MVA3	2.90	3.10	0.12	49	12	18	31	62	0.10	11	<0.10
MVA3	5.80	6.00	0.11	11	5.2	5.1	17	27	0.06	4.8	<0.10

Drill Hole No.	Depth (m)		Contaminant								
	From	To	Cd	Cr	Cu	Ni	Pb	Zn	Hg	As	Ag
			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MVA4	0.00	0.20	0.14	29	37	12	36	96	0.14	9.9	0.46
MVA4	0.90	1.10	0.13	27	29	16	48	85	0.15	11	0.33
MVA4	1.70	1.90	0.12	30	21	17	47	68	0.40	**14**	<0.10
MVA4	2.90	3.10	0.15	24	10	15	41	55	0.09	10	<0.10
MVA4	5.80	6.00	0.06	8.9	3.9	6.4	13	23	<0.05	8.4	<0.10
MVA5	0.00	0.20	0.13	23	23	10	28	75	0.09	9.3	0.27
MVA5	0.90	1.10	0.13	25	23	14	42	79	0.10	10	<0.10
MVA5	1.70	1.90	0.13	24	24	14	34	86	0.25	9.1	0.32
MVA5	2.90	3.10	0.13	26	12	16	32	59	0.16	11	<0.10
MVA5	5.80	6.00	0.01	9.0	2.9	4.5	16	20	0.06	3.5	<0.10
MVA6	0.00	0.20	0.11	26	19	11	38	69	0.09	9.0	0.19
MVA6	0.90	1.10	0.13	24	22	14	35	74	0.09	10	0.25
MVA6	1.70	1.90	0.17	24	21	14	29	69	0.09	10	0.26
MVA6	2.90	3.10	0.13	27	12	17	32	59	0.06	9.3	<0.10
MVA6	5.80	6.00	<0.10	13	5.3	8.0	16	27	<0.05	4.8	<0.10
MVA7	0.00	0.20	0.20	26	20	11	39	70	0.13	9.3	0.20
MVA7	0.90	1.10	0.13	32	18	19	44	78	0.08	10	0.20
MVA7	1.70	1.90	0.10	22	8.7	13	37	47	0.09	7.5	<0.10
MVA7	2.90	3.10	<0.10	25	10	14	26	51	0.09	7.4	0.13
MVA7	5.80	6.00	<0.10	9.0	3.4	5.1	11	18	0.21	4.7	0.13
MVA8	0.00	0.20	0.16	33	25	20	40	79	0.11	**13**	0.18
MVA8	0.90	1.10	0.15	36	37	22	45	93	0.18	12	0.23
MVA8	1.70	1.90	0.12	33	22	20	40	66	0.11	**13**	<0.10
MVA8	2.90	3.10	<0.10	23	8.8	16	35	53	0.05	7.5	<0.10
MVA9	0.00	0.20	0.15	40	30	24	47	77	0.21	**16**	0.13
MVA9	0.90	1.10	<0.10	23	6.4	13	34	47	0.05	7.0	<0.10
MVA9	1.70	1.90	<0.10	24	5.3	13	30	50	<0.05	6.5	<0.10
MVA9	2.90	3.10	0.14	30	13	18	32	60	0.09	11	<0.10
MVA10	0.00	0.20	0.16	43	35	26	50	88	0.19	**17**	0.16
MVA10	0.90	1.10	<0.10	26	9.3	15	35	52	0.05	7.1	<0.10
MVA10	1.70	1.90	<0.10	23	4.6	13	30	46	<0.05	7.2	<0.10
MVA10	2.90	3.10	0.14	30	13	18	46	59	0.07	10	<0.10
MVA11	0.00	0.20	0.14	35	28	22	53	72	0.48	**16**	0.12
MVA11	0.90	1.10	0.13	30	19	19	38	61	0.12	**13**	<0.10
MVA11	1.70	1.90	<0.10	25	11	16	35	56	0.06	8.0	<0.10
MVA11	2.90	3.10	<0.10	28	7.6	18	31	63	0.05	7.5	<0.10
MVA12	0.00	0.20	<0.10	28	9.3	19	44	63	0.05	4.9	<0.10
MVA12	0.90	1.10	<0.10	25	10	16	36	55	0.07	8.3	<0.10
MVA12	1.70	1.90	<0.10	25	7.4	18	25	57	<0.05	5.6	<0.10
MVA12	2.90	3.10	0.13	35	25	20	49	70	0.15	**15**	<0.10
MVA13	0.00	0.20	0.17	37	41	23	55	99	0.13	**15**	0.33
MVA13	0.90	1.10	0.17	40	34	23	52	86	0.18	**17**	0.17
MVA13	1.70	1.90	<0.10	18	11	17	41	61	0.06	8.7	<0.10
MVA13	2.90	3.10	<0.10	24	6.4	15	23	52	<0.05	5.1	<0.10
Reference Sample	N/A	N/A	<0.10	19	7.5	14	28	44	0.06	5.0	<0.10

Note: Figures in BOLD indicate an exceedance of the Lower Chemical Exceedance Level (LCEL)

Based on the results of the chemical testing, and in accordance with ETWB 34/2002, all sediment samples that exceeded the LCEL are required to undergo Tier III biological testing

to determine the ultimate disposal option. A biological test proposal was submitted on 13 July 2006 and agreed with EPD. A summary of the biological tests is provided below in *Section 4*.

4 BIOLOGICAL SCREENING

Chemical analysis revealed that some of the collected sediment samples were contaminated (category M) and required biological testing. In general, the Tier III biological testing was conducted on composite samples by mixing at most 4 continuous vertical or horizontal profile of the same category (M) although in some exceptional cases, the testing was done on the individual sample and the sample pooling scheme was summarised in *Table 3*. The sediment samples were mixed to ensure that bioassays were conducted on homogeneous material. The number of biological tests was 11 (including the reference sample).

Table 3 Summary of Sample Pooling for Biological Screening

Depth (m)	Vibrocore No													
	MVA 1	MVA 2	MVA 3	MVA 4	MVA 5	MVA 6	MVA 7	MVA 8	MVA 9	MVA 10	MVA 11	MVA 12	MVA 13	MVA 14[1]
0	CS2	L	L	L	L	L	L	CS5			CS8	L	CS6	CS10[1]
-0.9		CS1	CS3	L	L	L	L	L	L	L		L		
-1.9			L	CS4	L	L	L	CS7	L	L	L	L	L	
-2.9	L	L	L	L	L	L	L	L	L	L	L	CS9	L	
-5.9	-	-	L	L	L	L	L	-	-	-	-	-	-	-

Note: CS = Composite Sample of Category M sample; L = Category L Material; - = not applicable; [1]Core MVA14 was tested for TBT only but concentrations were not above the reporting limit.

The test species and bioassays followed the protocols detailed in ETWB 34/2002 and comprised a 10-day burrowing amphipod (*Leptocheirus plumulosus*), 20-day polychaete (*Neanthes arenaceodentata*) and a 48-96 hour bivalve (*Crassostrea gigas*). Endpoints (survival, normality, growth) were assessed in accordance with the decision criteria stipulated in ETWB 34/2002. The test species, endpoints and decision criteria used to determine the pass/failure of the bioassays is detailed below in *Table 4*.

Table 4 Test Endpoints and Decision Criteria for Tier III Biological Screening (ETWB, 34/2002)

Test	Endpoint	Failure Criteria
Amphipod (*Leptocheirus plumulosus*)	10-day Survival	Mean survival in the test sediment is significantly different ($p \leq 0.05$) from mean survival in the reference sediment **and** mean survival in test sediment <80% of mean survival in reference sediment.
Polychaete (*Neanthes arenaceodentata*)	20-day Growth (Dry Weight)	Mean dry weight in the test sediment is significantly different ($p \leq 0.05$) from mean dry weight in reference sediment **and** mean dry weight in test sediment <90% of mean dry weight in reference sediment.
Bivalve (*Crassostrea gigas*)	48 to 96-hour Normal Survival (Development)	Mean normality survival in test sediment is significantly different ($p \leq 0.05$) from mean normality survival in reference sediment **and** mean normality in test sediment <80% of mean normality survival in reference sediment.

Note: The sediment is deemed to have failed the biological test if it fails any one of the three bioassays; statistical tests performed using Students *t*-test; normal survival integrates normal development and survival endpoints.

To ensure high quality data, stringent QA/QC procedures were used and both negative and positive controls were run. The reference sediment was obtained from the waters off Sai Kung in Port Shelter (820057N 850234E) and subject to the chemical testing required for the test sediments (inorganic and organic contaminants detailed in the sediment test proposal; total organic carbon and grain size analyses). Positive controls were conducted with appropriate metal salts in accordance with the laboratory's test procedures. Results of the positive controls were compared against the laboratory control charts. All biological testing was conducted within the holding times stipulated in ETWB 34/2002 by a HOKLAS-accredited laboratory (Lam Laboratory Ltd.). The summary results of the biological screening are presented below in *Table 5*. The full laboratory report comprising water quality data (including ammonia and salinity), details of the sample preparation procedures, source of test species, QA/QC (including results of negative and positive controls) and statistical tables is appended in *Annex C*.

Table 5 Bioassay Summary Results and Decision Criteria based on ETWB 34/2002

Sample / Test	End Point	Percentage Difference between Test and Reference	Statistical ($p \leq 0.05$) Difference[1]	Pass/Fail[2]
Amphipod	Mean (± SD) % Survival	< 80%	Sample vs Reference	
Control (Negative)	90.0 ± 0.0	n/a	n/a	n/a
CS1	82.0 ± 4.5	No	-	Pass
CS2	66.0 ± 8.2	Yes	Yes	Fail
CS3	86.0 ± 4.2	No	-	Pass
CS4	81.0 ± 4.2	No	-	Pass
CS5	82.0 ± 6.7	No	-	Pass
CS6	84.0 ± 4.2	No	-	Pass
CS7	74.0 ± 6.5	No	-	Pass
CS8	80.0 ± 7.1	No	-	Pass
CS9	81.0 ± 4.2	No	-	Pass
CS10	89.0 ± 8.2	No	-	Pass
Reference	92.0 ± 2.7	n/a	n/a	Pass
Polychaete	Mean (±SD) dry weight (mg)	<90%	Sample vs Reference	
Control (Negative)	65.9 ± 1.0	n/a	n/a	n/a
CS1	34.2 ± 21.5	Yes	No	Pass
CS2	27.2 ± 10.7	Yes	No	Pass
CS3	45.4 ± 5.6	No	-	Pass
CS4	62.5 ± 9.8	No	-	Pass
CS5	46.5 ± 9.1	No	-	Pass
CS6	45.7 ± 4.6	No	-	Pass
CS7	32.7 ± 13.7	Yes	No	Pass
CS8	33.2 ± 10.2	Yes	No	Pass
CS9	31.5 ± 6.5	Yes	No	Pass
CS10	53.4 ± 12.3	No	-	Pass
Reference	46.8 ± 22.2	n/a	n/a	n/a
Bivalve Larvae	Mean (± SD) % Normal Survival	< 80%	Sample vs Reference	
Control (Negative I)	71.3 ± 3.9	n/a	n/a	n/a
Control (Negative II)	73.6 ± 5.1	n/a	n/a	n/a
CS1	49.0 ± 3.2	Yes	Yes	Fail
CS2	48.9 ± 2.7	Yes	Yes	Fail
CS3	54.7 ± 6.9	Yes	Yes	Fail
CS4	51.0 ± 4.0	Yes	Yes	Fail
CS5	73.3 ± 11.1	No	-	Pass
CS6	78.1 ± 6.3	No	-	Pass
CS7	76.7 ± 4.9	No	-	Pass

Sample / Test	End Point	Percentage Difference between Test and Reference	Statistical ($p \leq 0.05$) Difference[1]	Pass/Fail[2]
CS8	80.7 ± 4.8	No	-	Pass
CS9	61.4 ± 1.8	No	-	Pass
CS10	71.3 ± 3.6	No	-	Pass
Reference	70.3 ± 5.5	n/a	n/a	n/a

Note: n/a = not applicable; [1]Statistical Test (one tail *t*-test) was performed if the sample statistic is less than the specified percentage of the Reference; [2]Pass/Fail condition from the decision criteria in ETWB 34/2002 (see *Table 4* above);

Amphipod Survival

The amphipod survival rate in the Reference sediment was 92.0 ± 2.7 % (mean ± SD). Comparing to the Reference sediment, the amphipod survival rate in the testing composite samples ranged between 71.7 – 96.7% of the Reference sediment. Only one composite sample CS2 has the survival rate lower than 80% of the Reference sediment and statistical test suggested that the difference was statistically significant ($P<0.05$). Based on the ETWB 34/2002 decision criteria detailed above, all the test sediment samples passed the amphipod test, except CS2.

Amphipod survival in the clean negative control sediment (mud and sand collected from a clean area on the eastern coast of the New Territories and Hong Kong Island, respectively) was 90.0 % indicating that the individuals used in the tests were in good condition (survival acceptability criterion is ≥90%; *Annex C*). The positive control (reference toxicant test conducted with cadmium chloride) indicated that the sensitivity of the amphipods was within acceptable limits as the 96-h LC_{50} was 0.99 mg L^{-1} Cd (laboratory control limits are 0.92 ± 0.41 mg L^{-1} Cd [mean ± 2SD]). Water quality parameters throughout the testing were within acceptable ranges for this species (*Annex C*).

Polychaete Growth

For polychaetes held in the Reference sediment, the mean total dry weight on day 20 of the test was 46.8 ± 22.2 mg (mean ± SD). The mean total dry weight of polychaetes held in the testing composite samples on day 20 ranged between 58.1 – 133.5% of the Reference sediment. There were five composite samples (CS1, CS2, CS7, CS8 and CS9) with mean polychaete growth less than 90% of the Reference sediment, however, statistical tests indicated that the differences were statistically not significant ($P>0.05$). Based on the ETWB 34/2002 decision criteria detailed above, all the test sediment samples passed the polychaete test.

Mean polychaete survival in the clean negative control was 100.0% (survival acceptability criterion is ≥90%; *Annex C*) indicating that the individuals used in the tests were in good condition. The positive control (reference toxicant test conducted with cadmium chloride) indicated that the sensitivity of the polychaetes was within acceptable limits as the 96-h LC_{50} was 10.67 mg L^{-1} Cd (laboratory control limits are 9.89 ± 3.20 mg L^{-1} Cd [mean ± 2SD]). Water quality parameters throughout the testing were within acceptable ranges for this polychaete species (*Annex C*).

Bivalve Larvae Normal Survival

The 48-h normality survival rate of the bivalve larvae held in the Reference sediment was 70.3 ± 5.5 % (mean ± SD). The normality survival of the bivalve larvae held in the composite

samples ranged between 69.6 – 114.8% of the Reference sediment. There were four composite samples (CS1, CS2, CS3 and CS4) with the larval normality survival rate less than 80% of the Reference sediment and the statistical tests indicated that the differences were statistically significant ($P<0.05$). Based on the ETWB 34/2002 decision criteria, all of the test sediment samples passed the 48-h bivalve larval test, except CS1, CS2, CS3 and CS4.

The mean larval survival in the clean negative seawater controls (0.45 µm filtered natural seawater collected from Hong Kong Island) was 72.5% indicating that the individuals used in the tests were in a good condition (acceptable test validity for larval survival is >70%; *Annex C*). The positive control (reference toxicant test conducted with cadmium chloride) indicated that the sensitivity of the bivalve larvae was within acceptable limits as the 48-h EC_{50} was 1.44 mg L^{-1} Cd (laboratory control limits are 1.45 ± 0.54 mg L^{-1} Cu [mean ± 2SD]). Water quality parameters throughout the testing were within acceptable ranges for this bivalve species (*Annex C*).

5 SEDIMENT CLASSIFICATION

In accordance with ETWB 34/2002 chemical analyses revealed that 41 test sediment samples were Category L (all drill holes) while 16 sediment samples were Category M (due to lead, copper, mercury and arsenic concentrations exceeding the LCEL, *Table 1*) which were present in selected depth from drill hole MVA1-MVA4 and MVA8 to MVA13. The Category L material shall be dredged, transported and disposed of in a manner which minimizes the loss of contaminants either into solution or by resuspension and the material can be disposed of in Type I Open Sean Disposal facility (*Figure 2*).

Based on the chemical analyses, the 16 Category M sediment samples were required to undergo biological screening to determine the ultimate disposal option. A suite of bioassays was conducted following the protocols, endpoints and pass/fail criteria stipulated in ETWB 34/2002. Significant differences were evident between test and Reference sediments for the composite samples. Based on both the statistical test results and failure criteria (based on percentage differences in endpoint response between the test and Reference sediments) all composite samples passed the polychaete growth test; composite sample CS2 (representing 3 samples from vibrocore MVA1) failed the amphipod test; composite samples CS1, CS2, CS3 and CS4 failed the bivalve larval assay. As the sediment is deemed to have failed the biological screening if a failure is recorded in any one of the three bioassays, the four composite samples (CS1-CS4; representing 7 individual samples from vibrocores MVA1-4) failed the biological screening and are suitable for Type 2 Confined Marine Disposal (*Figure 2*). Composite samples CS5-13 (represent 9 individual samples from vibrocores MVA8-13) passed the biological screening and are suitable for Type 1 Open Sea Disposal (Dedicated Sites) facility. The Category M material must be dredged and transported with care and effectively isolated from the environment upon final disposal. The disposal options for the material to be dredged along the pipeline alignment are summarised in Table 6 below.

Table 6 Summary of Disposal Options

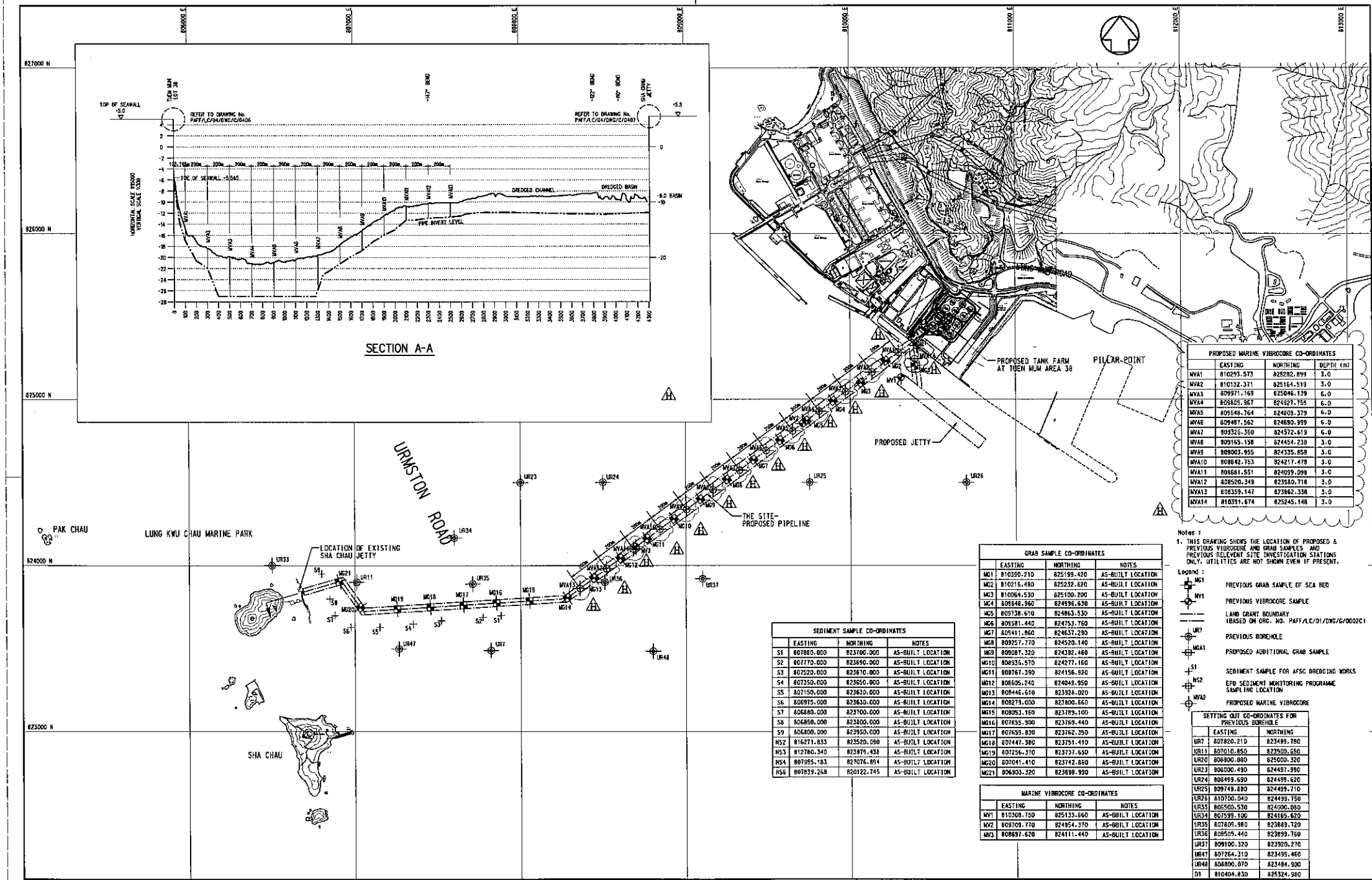
Depth (m)	Vibrocore No.												
	MVA 1	MVA 2	MVA 3	MVA 4	MVA 5	MVA 6	MVA 7	MVA 8	MVA 9	MVA 10	MVA 11	MVA 12	MVA 13
0	2	1	1	1	1	1	1	1D	1D	1D	1D	1	1D
-0.9	2	2	2	1	1	1	1	1	1	1	1D	1	1D
-1.9	2	2	1	2	1	1	1	1D	1	1	1	1	1
-2.9	1	1	1	1	1	1	1	1	1	1	1	1D	1
-5.9	-	-	1	1	1	1	1	-	-	-	-	-	-

Note: 1 = Type 1 Open Sea Disposal; 1D = Type 1 Open Sea Disposal (Dedicated Sites); 2 = Type 2 Confined Marine Disposal; - = dredging not required; Shaded Cell = Category M material.

Figure 1

Site Location Plan for Proposed Fuel Pipeline

PAFF/BA/01/DWG/C/1023



PROPOSED MARINE VIBROCORE CO-ORDINATES			
	EASTING	NORTHING	DEPTH (m)
MVA1	810293.573	825282.899	3.0
MVA2	810132.371	825164.519	3.0
MVA3	809971.169	825046.139	6.0
MVA4	809809.967	824927.759	6.0
MVA5	809648.764	824809.379	6.0
MVA6	809487.562	824690.999	6.0
MVA7	809326.360	824572.619	6.0
MVA8	809165.158	824454.238	3.0
MVA9	809003.955	824335.858	3.0
MVA10	808842.753	824217.478	3.0
MVA11	808681.551	824099.098	3.0
MVA12	808520.349	823980.718	3.0
MVA13	808359.147	823862.338	3.0
MVA14	810391.674	825245.148	3.0

Notes :
1. THIS DRAWING SHOWS THE LOCATION OF PROPOSED & PREVIOUS VIBROCORE AND GRAB SAMPLES AND PREVIOUS RELEVENT SITE INVESTIGATION STIATIONS ONLY. UTILITIES ARE NOT SHOWN EVEN IF PRESENT.

Legend :
- MG1 — PREVIOUS GRAB SAMPLE OF SEA BED
- MV1 — PREVIOUS VIBROCORE SAMPLE
- LAND GRANT BOUNDARY (BASED ON ORG. NO. PAFF/LC/01/DWG/G/00021)
- UR7 — PREVIOUS BOREHOLE
- MGA1 — PROPOSED ADDITIONAL GRAB SAMPLE
- S1 — SEDIMENT SAMPLE FOR AFSC DREDGING WORKS
- NS2 — EPD SEDIMENT MONITORING PROGRAMME SAMPLING LOCATION
- MVA2 — PROPOSED MARINE VIBROCORE

SETTING OUT CO-ORDINATES FOR PREVIOUS BOREHOLE		
	EASTING	NORTHING
UR7	807820.210	823489.780
UR11	807010.850	823900.050
UR20	808800.080	825000.320
UR23	806000.490	824497.990
UR24	808499.690	824499.620
UR25	809749.880	824499.710
UR26	810700.040	824499.750
UR33	805500.530	824000.080
UR34	807599.100	824165.620
UR35	807809.980	823889.720
UR36	808509.440	823899.760
UR37	809100.320	823920.270
UR47	807264.310	823499.460
UR48	808800.070	823484.900
D1	810404.830	825324.980

GRAB SAMPLE CO-ORDINATES			
	EASTING	NORTHING	NOTES
MG1	810390.210	825199.420	AS-BUILT LOCATION
MG2	810215.480	825232.620	AS-BUILT LOCATION
MG3	810064.530	825100.200	AS-BUILT LOCATION
MG4	809848.860	824996.630	AS-BUILT LOCATION
MG5	809738.610	824863.530	AS-BUILT LOCATION
MG6	809581.440	824753.760	AS-BUILT LOCATION
MG7	809411.860	824637.290	AS-BUILT LOCATION
MG8	809257.770	824520.140	AS-BUILT LOCATION
MG9	809087.320	824392.460	AS-BUILT LOCATION
MG10	808936.570	824277.160	AS-BUILT LOCATION
MG11	808767.390	824156.920	AS-BUILT LOCATION
MG12	808605.240	824049.950	AS-BUILT LOCATION
MG13	808446.610	823928.020	AS-BUILT LOCATION
MG14	808279.000	823800.660	AS-BUILT LOCATION
MG15	808053.160	823789.100	AS-BUILT LOCATION
MG16	807835.900	823769.440	AS-BUILT LOCATION
MG17	807659.830	823762.350	AS-BUILT LOCATION
MG18	807447.580	823751.410	AS-BUILT LOCATION
MG19	807256.370	823737.650	AS-BUILT LOCATION
MG20	807041.410	823742.860	AS-BUILT LOCATION
MG21	806903.320	823898.950	AS-BUILT LOCATION

SEDIMENT SAMPLE CO-ORDINATES			
	EASTING	NORTHING	NOTES
S1	807880.000	823700.000	AS-BUILT LOCATION
S2	807770.000	823690.000	AS-BUILT LOCATION
S3	807520.000	823670.000	AS-BUILT LOCATION
S4	807350.000	823650.000	AS-BUILT LOCATION
S5	807150.000	823630.000	AS-BUILT LOCATION
S6	806975.000	823630.000	AS-BUILT LOCATION
S7	806880.000	823700.000	AS-BUILT LOCATION
S8	806850.000	823800.000	AS-BUILT LOCATION
S9	806800.000	823950.000	AS-BUILT LOCATION
NS2	816271.833	823520.090	AS-BUILT LOCATION
NS3	812780.340	823875.438	AS-BUILT LOCATION
NS4	807955.183	827076.864	AS-BUILT LOCATION
NS6	807839.268	820122.745	AS-BUILT LOCATION

MARINE VIBROCORE CO-ORDINATES			
	EASTING	NORTHING	NOTES
MV1	810308.750	825133.660	AS-BUILT LOCATION
MV2	809709.770	824954.370	AS-BUILT LOCATION
MV3	808697.620	824111.440	AS-BUILT LOCATION

Rev	Date	Description	Checked
A	19-12-02	FIRST ISSUE (PRELIMINARY LAYOUT BASED UPON DRAWING NO. PAFF/BA/01/DWG/C/1004 REV. D).	
B	29-11-02	PREVIOUS BOREHOLES (INT. UR11, UR25, UR26, UR33, UR35, UR36, UR37, UR47, & UR48 ADDED.	
C	28-11-03	PREVIOUS BOREHOLES (ROC. UR25, UR26 & UR34 ADDED	
D	22-05-04	ADDITIONAL MARINE VIBROCORES MV41 TO MV143 ADDED	
E	07-07-04	SEDIMENT SAMPLES S1 TO S9, NS2, NS3, NS4 & NS6 ADDED	
F	20-07-04	PROPOSED SAMPLING REVISED	
G	14-09-04	MARINE VIBROCORE MV42, MV44, MV48, MV41, MV43, MV422, MV426 & MV43 ADDED	
H	23-03-05	SEDIMENT SAMPLE MG41, MG42 & MG43 DELETED	
-	29/06/05	PREVIOUS DRAWING NO. FIGURE 1 REV. G RE-NUMBERED TO 1023	

Rev	Date	Description	Checked
H	23-03-05	GENERAL REVISION	

Designed: POS | Drawn: SNL | Checked: MJL
Design Team Leader: | Date:
Approved: | Date:
Unit | 16/08/2004

Contractor: LEIGHTON CONTRACTORS (ASIA) LIMITED

Babtie Asia technical and management consultants
17th Floor, Cornwall House, Taikoo Place, 979 King's Road, Quarry Bay, Hong Kong
Tel (852) 2560 5789 Fax (852) 2568 0561 E-mail: babtie@babtie-asia.hk

TANKER BERTH AND FUEL FARM FACILITIES TUEN MUN AREA 38

Permanent Aviation Fuel Facility

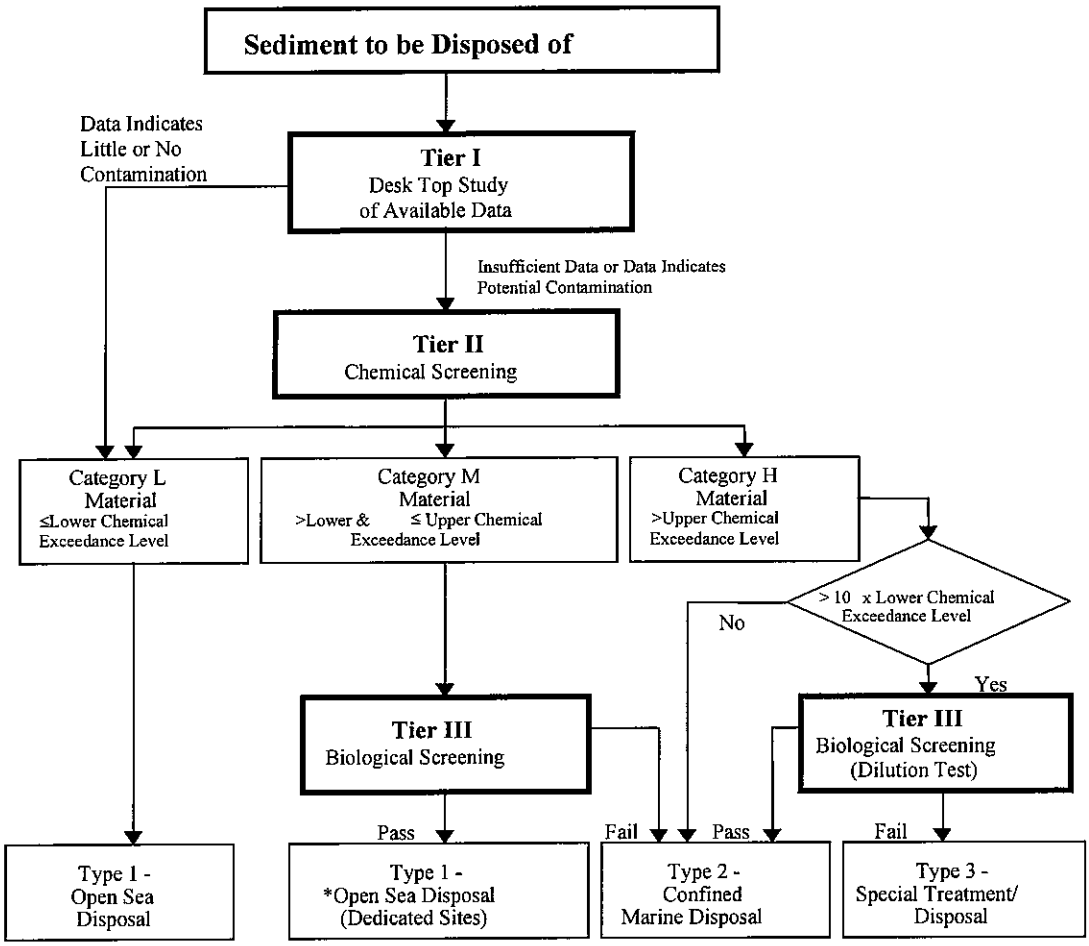
SITE LOCATION PLAN FOR PROPOSED FUEL PIPELINE

Drawing No. PAFF/BA/01/DWG/C/1023 H

FILENAME: J:\Design & Eng (DWG& Specs & Calcs)\Drawings\DGN\2006\0529\1023_1.dgn

Figure 2

Management Framework for Dredged/Excavated Sediment (ETWB 34/2002; Appendix C)



* Dedicated Sites will be monitored to confirm that there is no adverse impact.

Annex A

Vibrocore Logs and Sampling Co-ordinates

Lam Geotechnics Limited

Our Ref. : *LG26010/1.0/018/06*
Date : *29 June 2006*

By Fax
(2404-0081)

Leighton Contractors (Asia) Ltd.
39/F., Sun Hung Kai Centre
30 Harbour Road,
Hong Kong

Attn: Mr. Brian Gillon

Dear Sir,

Permanent Aviation Fuel Facility
At Area 38 Tuen Mun
Geotechnical Investigation
Submission of Records and Reports

Please find attached the following documents.

Document	No. of Copy	Description
Daily Site Record	---	---
Preliminary Log	1	Vibrocore Nos. MVA1 to MVA14
Test Result	---	---
Draft Fieldwork Report with Photographs	---	---
Draft Laboratory Report with Photographs	---	---
Final Fieldwork Report with Photographs	---	---
Others (Specify)	---	---

Remarks: For your comment.

Yours faithfully,
For and on behalf of
Lam Geotechnics Limited

H.M. Chow
Project Manager

Encl.

CM/jl

VIBROCORE RECORD

VIBROCORE No. **MVA1**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **810293.10** N **825283.60**	DATE from **17/06/2006** to **17/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-14.20** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
17/06/2006			100		1		0.00	-14.20	0.00			Greyish brown, clayey silty fine to coarse SAND (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
								-15.20	1.00			Soft, grey, silty CLAY (MARINE DEPOSIT)
					4		1.45					
					5		1.50					
					8		2.45					
					7		2.50					
		15.80m at 10:00			6		3.10	-17.40	3.20			End of investigation hole at 3.20m
17/06/2006							3.20		10.00			

- Small Disturbed Sample
- Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths
3. Glass sample (1 litre x 2) taken from the seabed adjacent to vibrocore location.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA2**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **810132.80** N **825165.10**	DATE from **16/06/2006** to **16/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-17.90** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
16/06/2006			100		1		0.00	-17.90	0.00			Soft, grey, silty CLAY (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45					
					5		1.50					
					6		2.45					
					7		2.50					
		20.20m at 12:00			8		3.10 3.20	-21.10	3.20			
18/06/2006												End of investigation hole at 3.20m
									10.00			

- Small Disturbed Sample
- Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.
3. Glass sample (1 litre x 2) taken from the seabed adjacent to vibrocore location.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA3**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **809971.80** N **825045.50**	DATE from **17/06/2006** to **17/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-20.20** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
17/06/2006			84				0.00	-20.20	0.00			Soft, greyish brown, silty CLAY (MARINE DEPOSIT)
					1		0.50					
					2		1.45					
					3		1.50					
					4		2.45	-22.70	2.50			Soft, grey, silty CLAY (MARINE DEPOSIT)
					5		2.50					
					6		3.45					
					7		3.50					
					8		4.45					
					9		4.50					
					10		5.45					
					11		5.50					
		22.40m at 13:30			12		6.00	-26.20	6.00			Grey, slightly clayey silty fine SAND (MARINE DEPOSIT)
17/06/2006							6.10	-26.30	6.10			End of investigation hole at 6.10m
									10.00			

● Small Disturbed Sample

□ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.50-1.50m, 1.50-2.50m, 2.50-3.50m, 3.50-4.50m, 4.50-5.50m, 5.50-6.00m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA4**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **809810.50** N **824927.40**	DATE from **19/06/2006** to **19/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-20.90** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
19/06/2006			89				0.00	-20.90	0.00			Very soft, greyish brown, clayey SILT (MARINE DEPOSIT)
					1		0.50					
					2		1.45					
					3		1.50					
					4		2.45	-23.40	2.50			
					5		2.50					Soft, grey, silty CLAY (MARINE DEPOSIT)
					6		3.45					
					7		3.50					
					8		4.45	-25.40	4.60			
					9		4.50					Soft, grey, sandy silty CLAY with occasional shell fragments (MARINE DEPOSIT)
					10		5.45	-26.40	5.50			
					11		5.50					Greyish yellow, clayey silty fine to coarse SAND (ALLUVIUM)
		22.00m at 10:30			12		6.00	-27.00	6.10			
19/06/2006							6.10					End of investigation hole at 6.10m
									10.00			

● Small Disturbed Sample

□ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.50-1.50m, 1.50-2.50m, 2.50-3.50m, 3.50-4.50m, 4.50-5.50m, 5.50-6.00m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.

PRELIMINARY

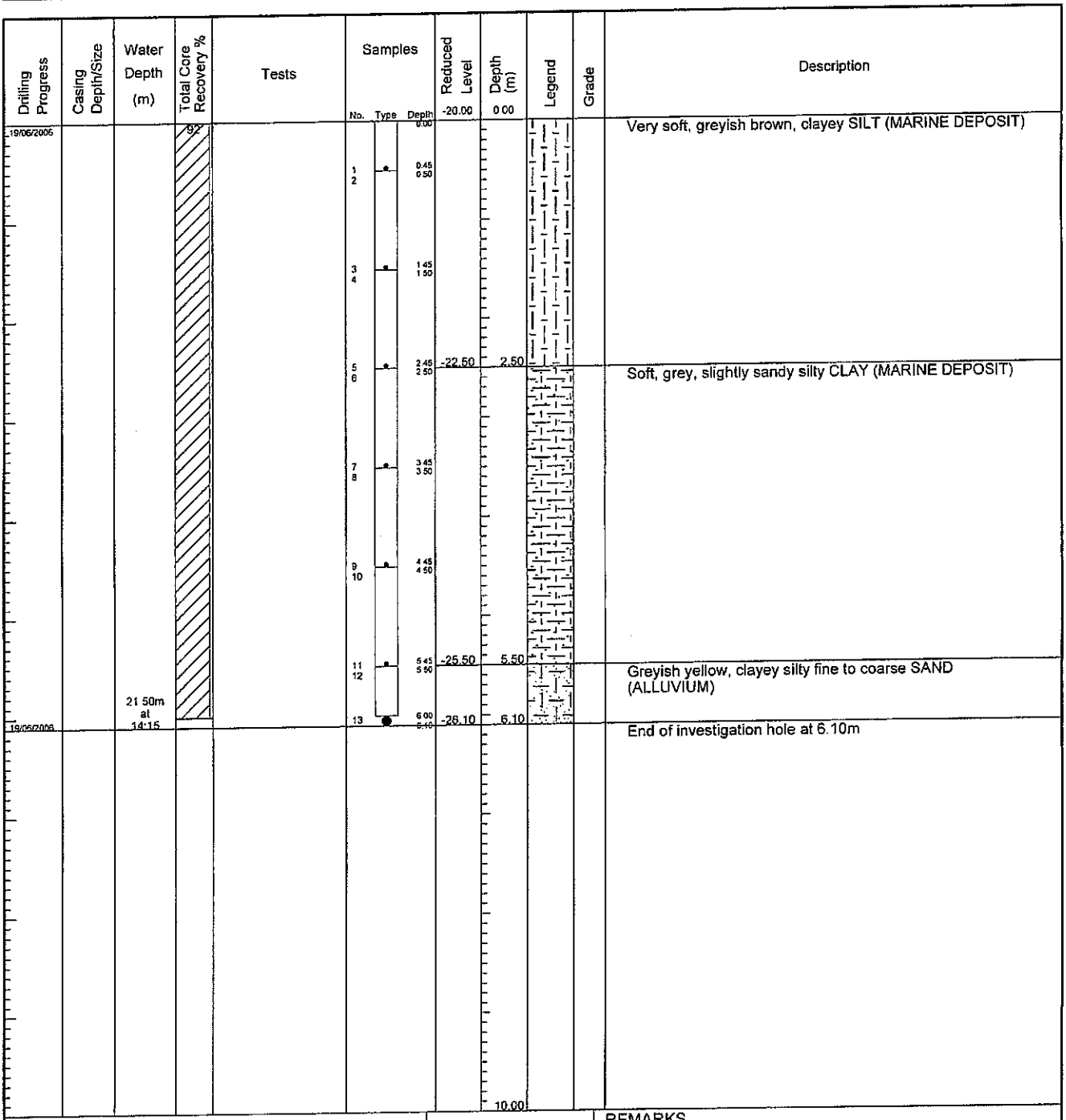
VIBROCORE RECORD

VIBROCORE No. **MVA5**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **809648.80** N **824808.70**	DATE from **19/06/2006** to **19/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-20.00** mPD



● Small Disturbed Sample

□ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.50-1.50m, 1.50-2.50m, 2.50-3.50m, 3.50-4.50m, 4.50-5.50m, 5.50-6.00m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.

PRELIMINARY

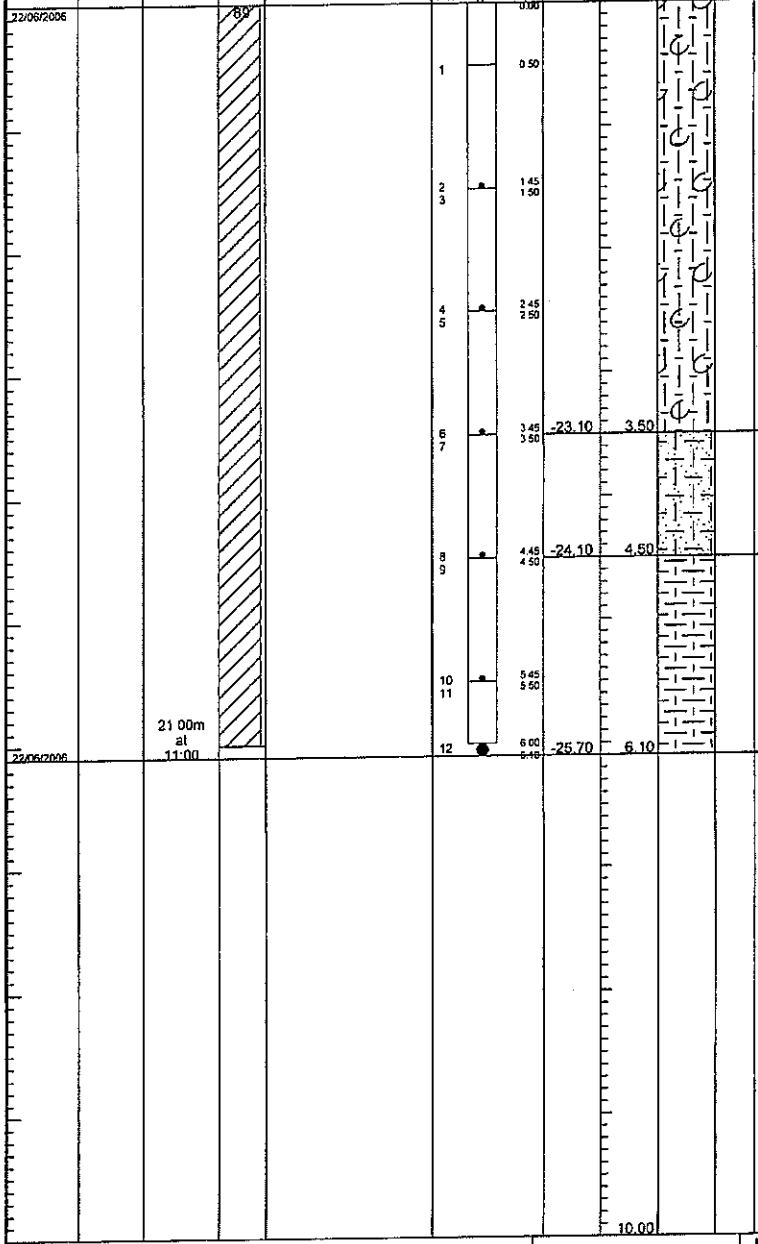
VIBROCORE RECORD

VIBROCORE No. **MVA6**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES E **809486.90** N **824690.30**	PROJECT No. **LG26010**
MACHINE & No. **BR4**		DATE from **22/06/2006** to **22/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-19.60** mPD



Description

Very soft, dark grey, clayey SILT with some shell fragments (MARINE DEPOSIT)

Greyish brown, clayey silty fine to medium SAND (MARINE DEPOSIT)

Soft, grey, silty CLAY (MARINE DEPOSIT)

End of investigation hole at 6.10m

- ● Small Disturbed Sample
- ▯ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.50-1.50m, 1.50-2.50m, 2.50-3.50m, 3.50-4.50m, 4.50-5.50m, 5.50-6.00m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA7**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **809325.70** N **824573.20**	DATE from **20/06/2006** to **20/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-19.90** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
20/06/2006			92		1		0.45	-19.90	0.00			Very soft, greyish brown and dark grey, clayey SILT with occasional shell fragments (MARINE DEPOSIT)
					2		0.50					
					3		1.45					
					4		1.50					
					5		2.45	-22.40	2.50			Soft, grey, silty CLAY (MARINE DEPOSIT)
					6		2.50					
					7		3.45					
					8		3.50					
					9		4.45					
					10		4.50					
					11		5.45					
					12		5.50					
		21.00m at 11.00			13		6.00 6.10	-25.90 -26.00	6.00 6.10			Yellow, slightly silty clayey fine to coarse SAND (ALLUVIUM) End of investigation hole at 6.10m
20/06/2006									10.00			

● Small Disturbed Sample

□ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.50-1.50m, 1.50-2.50m, 2.50-3.50m, 3.50-4.50m, 4.50-5.50m, 5.50-6.00m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA8**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **809165.60** N **824454.70**	DATE from **23/06/2006** to **23/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-17.30** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
23/06/2006			98		1		0.00	-17.30	0.00			Very soft, greyish yellow, clayey SILT (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45	-18.80	1.50			Very soft, grey, clayey SILT (MARINE DEPOSIT)
					5		1.50					
					6		2.45	-19.80	2.50			Very soft, greyish yellow, silty CLAY (MARINE DEPOSIT)
					7		2.50					
		19.00m at 10:15			8		3.10	-20.40	3.10			Very soft, grey and greyish yellow, slightly fine sandy clayey SILT with some shell fragments (MARINE DEPOSIT)
23/06/2006							3.20	-20.50	3.20			End of investigation hole at 3.20m
									10.00			

● Small Disturbed Sample

□ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA9**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **809003.30** N **824336.40**	DATE from **21/06/2006** to **21/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-14.50** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
21/06/2006			100		1		0.00	-14.50	0.00			Very soft, greyish brown, clayey SILT (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45	-16.00	1.50			Soft, grey, silty CLAY (MARINE DEPOSIT)
					5		1.50					
					6		2.45	-17.00	2.50			Soft, dark grey, silty CLAY with some shell fragments (MARINE DEPOSIT)
					7		2.50					
		15.00m at 14:30			8		3.10	-17.60	3.10			Soft, grey, silty CLAY (MARINE DEPOSIT)
21/06/2006							3.20	-17.70	3.20			End of investigation hole at 3.20m
									10.00			

● Small Disturbed Sample

▯ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA10**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES E **808842.30** N **824217.90**	PROJECT No. **LG26010**
MACHINE & No. **BR4**		DATE from **21/06/2006** to **21/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-11.90** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
21/06/2006			95		1		0.00	-11.90	0.00			Soft, grey, silty CLAY (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45					
					5		1.50					
					6		2.45	-14.40	2.50			Soft, dark grey, sandy silty CLAY with many shell fragments (MARINE DEPOSIT)
					7		2.50					
21/06/2006		13.00m at 11:25			8		3.10 3.20	-15.10	3.20			End of investigation hole at 3.20m
									10.00			

- Small Disturbed Sample
- Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA11**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **808681.80** N **824099.60**	DATE from **23/06/2006** to **23/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-11.10** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
23/06/2006			100		1		0.00	-11.10	0.00			Very soft, greyish yellow, silty CLAY (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45					
					5		1.50					
					6		2.45	-13.60	2.50			Soft, grey and dark grey, slightly fine sandy silty CLAY with some shell fragments (MARINE DEPOSIT)
					7		2.50					
23/06/2006		12.60m at 10:30			8		3.10	-14.30	3.20			End of investigation hole at 3.20m
									10.00			

- Small Disturbed Sample
- Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA12**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES E **808520.70** N **823981.20**	PROJECT No. **LG26010**
MACHINE & No. **BR4**		DATE from **23/06/2006** to **23/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-9.50** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
23/06/2006			100		1		0.00	-9.50	0.00			Very soft, greyish yellow, silty CLAY (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45	-11.00	1.50			Soft, grey, slightly fine sandy silty CLAY with occasional shell fragments (MARINE DEPOSIT)
					5		1.50					
					6		2.45					
					7		2.50					
		10.00m at 15:00			8		3.10	-12.60	3.10			Very soft, dark grey spotted white, silty CLAY with many shell fragments (MARINE DEPOSIT)
23/06/2006							3.20	-12.70	3.20			End of investigation hole at 3.20m
									10.00			

● Small Disturbed Sample

□ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA13**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES E **808358.70** N **823862.50**	PROJECT No. **LG26010**
MACHINE & No. **BR4**		DATE from **24/06/2006** to **24/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-10.20** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
24/06/2006			95		1		0.00	-10.20	0.00			Very soft, greyish yellow, silty CLAY (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45					
					5		1.50					
					6		2.45	-12.70	2.50			Soft, dark grey, slightly fine sandy silty CLAY with some shell fragments (MARINE DEPOSIT)
					7		2.50					
		12.00m at 10:45			8		3.10	-13.40	3.20			End of investigation hole at 3.20m
24/06/2006							3.20					
									10.00			

● Small Disturbed Sample

□ Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.

PRELIMINARY

VIBROCORE RECORD

VIBROCORE No. **MVA14**

SHEET 1 of 1

PROJECT **Permanent Aviation Fuel Facility at Area 38 Tuen Mun**

METHOD **VC**	CO-ORDINATES	PROJECT No. **LG26010**
MACHINE & No. **BR4**	E **810391.30** N **825244.60**	DATE from **15/06/2006** to **15/06/2006**
FLUSHING MEDIUM **Water**	ORIENTATION **Vertical**	GROUND LEVEL **-11.50** mPD

Drilling Progress	Casing Depth/Size	Water Depth (m)	Total Core Recovery %	Tests	Samples No.	Type	Depth	Reduced Level	Depth (m)	Legend	Grade	Description
15/06/2006			98		1		0.00	-11.50	0.00			Very soft, greyish brown, silty CLAY (MARINE DEPOSIT)
					2		0.45					
					3		0.50					
					4		1.45					
					5		1.50					
					6		2.45	-14.00	2.50			Yellow, clayey silty fine to coarse SAND (ALLUVIUM)
					7		2.50					
15/06/2006		13.20m at 15:00			8		3.10 3.20	-14.70	3.20			End of investigation hole at 3.20m
									10.00			

- Small Disturbed Sample
- Vibrocore Sample

LOGGED H.K.Fung

DATE 28/06/2006

CHECKED M.Davies

DATE 28/06/2006

REMARKS

1. Logging based upon examination of small disturbed samples and ends of subsamples.
2. Subsamples taken at 0.00-0.50m, 0.50-1.50m, 1.50-2.50m and 2.50-3.10m depths.
3. Grab sample taken from 0.00-0.20m depth adjacent to vibrocore location.
4. Glass sample (1 litre x 2) taken from the seabed adjacent to vibrocore location.

PRELIMINARY

Annex B

Chemical Analysis Results

TEST REPORT

Report No.	: 100080N(1)
Project Name	: Permanent Aviation Fuel Facility
Customer	: Lam Geotechnics Limited
Address	: 2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Lab Job No.	: J514
Lab Sample No.	: 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577
Sample Description	: 57 samples said to be sediment
Sample Receipt Date	: 17 June 2006 - 26 June 2006
Test Period	: 20 June 2006 - 06 July 2006

Test Information

1. **Low Molecular Weight Polyaromatic Hydrocarbons, LMW PAHs**

CODE	Test Parameter	Reporting Limit ug/kg	Test Procedure
NAP	Naphthalene	55	S/O/PAH
ANY	Acenaphtylene	55	S/O/PAH
ANA	Acenaphtene	55	S/O/PAH
FLU	Fluorene	55	S/O/PAH
PHE	Phenanthrene	55	S/O/PAH
ANT	Anthracene	55	S/O/PAH

2. **High Molecular Weight Polyaromatic Hydrocarbons, HMW PAHs**

CODE	Test Parameter	Reporting Limit ug/kg	Test Procedure
CHR	Chrysene	170	S/O/PAH
BaA	Benzo(a)anthracene	170	S/O/PAH
BbF	Benzo(b)fluoranthene	170	S/O/PAH
BkF	Benzo(k)fluoranthene	170	S/O/PAH
BaP	Benzo(a)pyrene	170	S/O/PAH
DBA	Dibenz(ah)anthracene	170	S/O/PAH
FLT	Fluoranthene	170	S/O/PAH
IPY	Indeno(1,2,3-cd)pyrene	170	S/O/PAH
PYR	Pyrene	170	S/O/PAH
BPE	Benzo(ghi)perylene	170	S/O/PAH

Notes :
1. This report shall not be reproduced, except in full, without prior approval from Lam Laboratories Ltd.
2. Results relate to samples as received.
3. Results are based on dry sample weight.
4. < = less than
5. N/A = Not applicable
6. Test results satisfy all in-house QA/QC protocols as attached.
7. Test description (for in-house methods only) as follows:
   S/O/PAH:Ultra-Sonic extraction and GC-MS Quantification.
8. This report supersedes the one dated 06 July 2005 with report no.100080N.

Authorized Signatory : Wong Yau Tim

Issue Date: 14 Jul. 2006

TEST REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1. Low Molecular Weight Polyaromatic Hydrocarbons, LMW PAHs

Customer Ref.	Sample					NAP	ANY	ANA	FLU	PHE	ANT
Drillhole No.	Depth, m			Type	Specimen Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	No.	From	To								
MVA2	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA2	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA2	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA2	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA1	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA1	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA1	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA1	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA3	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA3	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA3	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA3	NA	5.80	6.00		NA	<55	<55	<55	<55	<55	<55
MVA4	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA4	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA4	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA4	NA	5.80	6.00		NA	<55	<55	<55	<55	<55	<55
MVA5	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA5	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA5	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA5	NA	5.80	6.00		NA	<55	<55	<55	<55	<55	<55

TEST REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

2. High Molecular Weight Polyaromatic Hydrocarbons, HMW PAHs

Customer Ref.	Sample					CHR	BaA	BbF	BkF	BaP	DBA	FLT	IPY	PYR	BPE
Drillhole No.	Depth, m			Type	Specimen Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	No.	From	To												
MVA2	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA2	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA2	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA2	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA1	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA1	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA1	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA1	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA3	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA3	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA3	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA3	NA	5.80	6.00		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA4	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA4	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA4	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA4	NA	5.80	6.00		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA5	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA5	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA5	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA5	NA	5.80	6.00		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170

TEST REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1. Low Molecular Weight Polyaromatic Hydrocarbons, LMW PAHs

Customer Ref.	Sample					NAP	ANY	ANA	FLU	PHE	ANT
Drillhole No.	Depth, m			Type	Specimen						
	No.	From	To		Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
MVA7	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA7	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA7	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA7	NA	5.80	6.00		NA	<55	<55	<55	<55	<55	<55
MVA9	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA9	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA9	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA9	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA10	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA10	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA10	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA10	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA6	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA6	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA6	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA6	NA	5.80	6.00		NA	<55	<55	<55	<55	<55	<55
MVA13	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA13	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA13	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA13	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55

TEST REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

2. High Molecular Weight Polyaromatic Hydrocarbons, HMW PAHs

Customer Ref.	Sample					CHR	BaA	BbF	BkF	BaP	DBA	FLT	IPY	PYR	BPE
Drillhole No.	Depth, m			Type	Specimen Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	No.	From	To												
MVA7	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA7	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA7	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA7	NA	5.80	6.00		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA9	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA9	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA9	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA9	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA10	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA10	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA10	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA10	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA6	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA6	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA6	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA6	NA	5.80	6.00		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA13	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA13	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA13	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA13	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170

TEST REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1. Low Molecular Weight Polyaromatic Hydrocarbons, LMW PAHs

Customer Ref.	Sample					NAP	ANY	ANA	FLU	PHE	ANT
Drillhole No.	Depth, m			Type	Specimen						
	No.	From	To		Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
MVA8	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA8	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA8	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA8	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA11	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA11	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA11	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA11	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
MVA12	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA12	NA	0.90	1.10		NA	<55	<55	<55	<55	<55	<55
MVA12	NA	1.70	1.90		NA	<55	<55	<55	<55	<55	<55
MVA12	NA	2.90	3.10		NA	<55	<55	<55	<55	<55	<55
Reference Sample	NA	NA	NA		NA	<55	<55	<55	<55	<55	<55
MVA3	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA4	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA5	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA6	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55
MVA7	NA	0.00	0.20		NA	<55	<55	<55	<55	<55	<55

TEST REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

2. High Molecular Weight Polyaromatic Hydrocarbons, HMW PAHs

Customer Ref.	Sample					CHR	BaA	BbF	BkF	BaP	DBA	FLT	IPY	PYR	BPE
Drillhole No.	Depth, m			Type	Specimen										
	No.	From	To		Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
MVA8	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA8	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA8	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA8	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA11	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA11	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA11	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA11	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA12	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA12	NA	0.90	1.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA12	NA	1.70	1.90		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA12	NA	2.90	3.10		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
Reference Sample	NA	NA	NA		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA3	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA4	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA5	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA6	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
MVA7	NA	0.00	0.20		NA	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170

----------End of Report----------

QUALITY CONTROL REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1. Low Molecular Weight Polyaromatic Hydrocarbons, LMW PAHs

1.1 Sample Duplicate

Customer Ref. / Drillhole No.	Sample					Batch	NAP	ANY	ANA	FLU	PHE	ANT
	Depth, m			Type	Specimen							
	No.	From	To		Depth m		%	%	%	%	%	%
MVA2	NA	0.00	0.20		NA	1	na*	na*	na*	na*	na*	na*
MVA7	NA	0.90	1.10		NA	2	na*	na*	na*	na*	na*	na*
MVA8	NA	0.00	0.20		NA	3	na*	na*	na*	na*	na*	na*
Control Limits							+/- 30 % of the mean					

1.2 Sample Spike (Spike Level = 5 ug)

Customer Ref. / Drillhole No.	Sample					Batch	NAP	ANY	ANA	FLU	PHE	ANT
	Depth, m			Type	Specimen							
	No.	From	To		Depth m		%	%	%	%	%	%
MVA2	N/A	0.00	0.20		N/A	1	86	85	83	85	87	89
MVA7	N/A	0.90	1.10		N/A	2	103	93	101	89	104	106
MVA8	N/A	0.00	0.20		N/A	3	104	94	96	88	89	99
Control Limits							70 - 130 %					

Notes :

1. na* = Relative deviation (RD) for duplicates cannot be evaluated as the value determined is lower than reporting limit.

Authorized Signatory : Wong Yau Tim

Issue Date: : 14 Jul. 2006

QUALITY CONTROL REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

2. High Molecular Weight Polyaromatic Hydrocarbons, HMW PAHs

2.1 Sample Duplicate

Customer Ref. / Drillhole No.	Sample					Batch	CHR	BaA	BbF	BkF	BaP	DBA	FLT	IPY	PYR	BPE
	Depth, m			Type	Specimen											
	No.	From	To		Depth m		%	%	%	%	%	%	%	%	%	%
MVA2	NA	0.00	0.20		NA	1	na*	na*	na*	na*	na*	na*	na*	na*	na*	na*
MVA7	NA	0.90	1.10		NA	2	na*	na*	na*	na*	na*	na*	na*	na*	na*	na*
MVA8	NA	0.00	0.20		NA	3	na*	na*	na*	na*	na*	na*	na*	na*	na*	na*
Control Limits							+/- 30 % of the mean									

2.2 Sample Spike (Spike Level = 5 ug)

Customer Ref. / Drillhole No.	Sample					Batch	CHR	BaA	BbF	BkF	BaP	DBA	FLT	IPY	PYR	BPE
	Depth, m			Type	Specimen											
	No.	From	To		Depth m		%	%	%	%	%	%	%	%	%	%
MVA2	N/A	0.00	0.20		N/A	1	90	83	103	94	91	89	91	100	99	91
MVA7	N/A	0.90	1.10		N/A	2	113	85	101	100	103	89	104	89	102	92
MVA8	N/A	0.00	0.20		N/A	3	98	87	89	96	104	92	98	101	93	92
Control Limits							70 - 130 %									

Notes :

1. na* = Relative deviation (RD) for duplicates cannot be evaluated as the value determined is lower than reporting limit.

QUALITY CONTROL REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1. Low Molecular Weight Polyaromatic Hydrocarbons, LMW PAHs

1.3 QC Sample (SETOC 2002.3.3)

Customer Ref.	Sample					Batch	NAP	ANY	ANA	FLU	PHE	ANT
Drillhole No.	Depth, m			Type	Specimen Depth m		%	%	%	%	%	%
	No.	From	To									
SETOC 2002.3.3	N/A	N/A	N/A		N/A	1	104	95	108	92	87	94
SETOC 2002.3.3	N/A	N/A	N/A		N/A	2	102	90	120	84	86	86
SETOC 2002.3.3	N/A	N/A	N/A		N/A	3	103	100	109	118	85	82
Control Limits							70 - 130 % of nominal value					

1.4 Method Blank

Customer Ref.	Sample					Batch	NAP	ANY	ANA	FLU	PHE	ANT
Drillhole No.	Depth, m			Type	Specimen Depth m		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	No.	From	To									
N/A	N/A	N/A	N/A		N/A	1	<55	<55	<55	<55	<55	<55
N/A	N/A	N/A	N/A		N/A	2	<55	<55	<55	<55	<55	<55
N/A	N/A	N/A	N/A		N/A	3	<55	<55	<55	<55	<55	<55
Control Limits							Less than reporting limit					

QUALITY CONTROL REPORT

Report No.	:	100080N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

2. High Molecular Weight Polyaromatic Hydrocarbons, HMW PAHs

2.3 QC Sample (SETOC 2002.3.3)

Customer Ref. / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	CHR %	BaA %	BbF %	BkF %	BaP %	DBA %	FLT %	IPY %	PYR %	BPE %
SETOC 2002.3.3	N/A	N/A	N/A		N/A	1	96	84	107	85	93	106	79	88	86	94
SETOC 2002.3.3	N/A	N/A	N/A		N/A	2	101	91	102	92	99	89	85	87	92	93
SETOC 2002.3.3	N/A	N/A	N/A		N/A	3	96	89	105	96	102	113	92	95	87	91
Control Limits							70 - 130% of nominal value									

2.4 Method Blank

Drillhole No. / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	CHR ug/kg	BaA ug/kg	BbF ug/kg	BkF ug/kg	BaP ug/kg	DBA ug/kg	FLT ug/kg	IPY ug/kg	PYR ug/kg	BPE ug/kg
N/A	N/A	N/A	N/A		N/A	1	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
N/A	N/A	N/A	N/A		N/A	2	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
N/A	N/A	N/A	N/A		N/A	3	<170	<170	<170	<170	<170	<170	<170	<170	<170	<170
Control Limits							Less than reporting limit									

TEST REPORT

Report No.	: 100062N(1)
Project Name	: Permanent Aviation Fuel Facility
Customer	: Lam Geotechnics Limited
Address	: 2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Lab Job No.	: J514
Lab Sample No.	: 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577
Sample Description	: 57 samples said to be sediment
Sample Receipt Date	: 17 June 2006 - 26 June 2006
Test Period	: 20 June 2006 - 5 July 2006

Test Information

Code	Test Parameter	Reporting Limits Sediment/Soil mg/kg	Test Procedure
Cd	Cadmium	0.10	S/M/DIG-RAR & M/ICP-MS
Cr	Chromium	1.0	S/M/DIG-RAR & M/ICP-MS
Cu	Copper	1.0	S/M/DIG-RAR & M/ICP-MS
Ni	Nickel	1.0	S/M/DIG-RAR & M/ICP-MS
Pb	Lead	1.0	S/M/DIG-RAR & M/ICP-MS
Zn	Zinc	10	S/M/DIG-RAR & M/ICP-MS
Hg	Mercury	0.05	S/M/DIG-RAR & M/ICP-MS
As	Arsenic	1.0	S/M/DIG-RAR & M/ICP-MS
Ag	Silver	0.10	S/M/DIG-RAR & M/ICP-MS

Notes :
1. This report shall not be reproduced, except in full, without prior approval from Lam Laboratories Ltd.
2. Results related to samples as received.
3. Results are based on dry sample weight.
4. < = less than
5. N/A = Not applicable
6. Test results satisfy all in-house QA/QC protocols as attached.
7. Test description (for in-house methods) as follows:
   S/M/DIG-RAR: Acid digestion.
   M/ICP-MS: ICP-MS Quantification.
8. This report supersedes the one dated 06 July 2005 with report no.100062N.

Authorized Signatory : Wong Yau Tim

Issue Date: 14 July 2006

TEST REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Result

Customer Ref.	Sample					Cd	Cr	Cu	Ni	Pb	Zn	Hg	As	Ag
Drillhole No.	Depth, m			Type	Specimen									
	No.	From	To		Depth, m	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MVA2	NA	0.00	0.20		NA	0.16	38	39	22	47	99	0.15	12	0.70
MVA2	NA	0.90	1.10		NA	0.15	33	24	20	46	71	0.22	17	0.12
MVA2	NA	1.70	1.90		NA	0.12	25	11	16	84	56	0.12	10	<0.10
MVA2	NA	2.90	3.10		NA	0.12	26	11	16	27	56	0.10	10	<0.10
MVA1	NA	0.00	0.20		NA	0.18	43	69	25	69	100	0.19	12	0.42
MVA1	NA	0.90	1.10		NA	0.16	33	22	19	52	73	0.22	17	0.12
MVA1	NA	1.70	1.90		NA	0.14	29	12	18	32	62	0.69	13	<0.10
MVA1	NA	2.90	3.10		NA	0.09	18	6.2	10	22	33	0.07	7.3	0.19
MVA3	NA	0.90	1.10		NA	0.19	49	72	26	66	120	0.22	14	0.41
MVA3	NA	1.70	1.90		NA	0.05	13	7.3	13	53	30	0.06	3.8	<0.10
MVA3	NA	2.90	3.10		NA	0.12	49	12	18	31	62	0.10	11	<0.10
MVA3	NA	5.80	6.00		NA	0.11	11	5.2	5.1	17	27	0.06	4.8	<0.10
MVA4	NA	0.90	1.10		NA	0.13	27	29	16	48	85	0.15	11	0.33
MVA4	NA	1.70	1.90		NA	0.12	30	21	17	47	68	0.40	14	<0.10
MVA4	NA	2.90	3.10		NA	0.15	24	10	15	41	55	0.09	10	<0.10
MVA4	NA	5.80	6.00		NA	0.06	8.9	3.9	6.4	13	23	<0.05	8.4	<0.10
MVA5	NA	0.90	1.10		NA	0.13	25	23	14	42	79	0.10	10	0.30
MVA5	NA	1.70	1.90		NA	0.13	24	24	14	34	86	0.25	9.1	0.32
MVA5	NA	2.90	3.10		NA	0.13	26	12	16	32	59	0.16	11	<0.10
MVA5	NA	5.80	6.00		NA	0.01	9.0	2.9	4.5	16	20	0.06	3.5	<0.10

TEST REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Result

Customer Ref.	Sample					Cd	Cr	Cu	Ni	Pb	Zn	Hg	As	Ag
Drillhole No.	Depth, m			Type	Specimen									
	No.	From	To		Depth, m	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MVA7	NA	0.90	1.10		NA	0.13	32	18	19	44	78	0.08	10	0.20
MVA7	NA	1.70	1.90		NA	0.10	22	8.7	13	37	47	0.09	7.5	<0.10
MVA7	NA	2.90	3.10		NA	<0.10	25	10	14	26	51	0.09	7.4	0.13
MVA7	NA	5.80	6.00		NA	<0.10	9.0	3.4	5.1	11	18	0.09	4.7	<0.10
MVA9	NA	0.00	0.20		NA	0.15	40	30	24	47	77	0.21	16	0.13
MVA9	NA	0.90	1.10		NA	<0.10	23	6.4	13	34	47	0.05	7.0	<0.10
MVA9	NA	1.70	1.90		NA	<0.10	24	5.3	13	30	50	<0.05	6.5	<0.10
MVA9	NA	2.90	3.10		NA	0.14	30	13	18	32	60	0.09	11	<0.10
MVA10	NA	0.00	0.20		NA	0.16	43	35	26	50	88	0.19	17	0.16
MVA10	NA	0.90	1.10		NA	<0.10	26	9.3	15	35	52	0.05	7.1	<0.10
MVA10	NA	1.70	1.90		NA	<0.10	23	4.6	13	30	46	<0.05	7.2	<0.10
MVA10	NA	2.90	3.10		NA	0.14	30	13	18	46	59	0.07	10	<0.10
MVA6	NA	0.90	1.10		NA	0.13	24	22	14	35	74	0.09	10	0.25
MVA6	NA	1.70	1.90		NA	0.17	24	21	14	29	69	0.09	10	0.26
MVA6	NA	2.90	3.10		NA	0.13	27	12	17	32	59	0.06	9.3	<0.10
MVA6	NA	5.80	6.00		NA	<0.10	13	5.3	8.0	16	27	<0.05	4.8	<0.10
MVA13	NA	0.00	0.20		NA	0.17	37	41	23	55	99	0.13	15	0.33
MVA13	NA	0.90	1.10		NA	0.17	40	34	23	52	86	0.18	17	0.17
MVA13	NA	1.70	1.90		NA	<0.10	18	11	17	41	61	0.06	8.7	<0.10
MVA13	NA	2.90	3.10		NA	<0.10	24	6.4	15	23	52	<0.05	5.1	<0.10

TEST REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Result

Customer Ref.	Sample					Cd	Cr	Cu	Ni	Pb	Zn	Hg	As	Ag
Drillhole No.	Depth, m			Type	Specimen									
	No.	From	To		Depth, m	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MVA8	NA	0.00	0.20		NA	0.16	33	25	20	40	79	0.11	13	0.18
MVA8	NA	0.90	1.10		NA	0.15	36	37	22	45	93	0.18	12	0.23
MVA8	NA	1.70	1.90		NA	0.12	33	22	20	40	66	0.11	13	<0.10
MVA8	NA	2.90	3.10		NA	<0.10	23	8.8	16	35	53	0.05	7.5	<0.10
MVA11	NA	0.00	0.20		NA	0.14	35	28	22	53	72	0.48	16	0.12
MVA11	NA	0.90	1.10		NA	0.13	30	19	19	38	61	0.12	13	<0.10
MVA11	NA	1.70	1.90		NA	<0.10	25	11	16	35	56	0.06	8.0	<0.10
MVA11	NA	2.90	3.10		NA	<0.10	28	7.6	18	31	63	0.05	7.5	<0.10
MVA12	NA	0.00	0.20		NA	<0.10	28	9.3	20	44	63	0.05	4.9	<0.10
MVA12	NA	0.90	1.10		NA	<0.10	25	10	15	36	55	0.07	8.3	<0.10
MVA12	NA	1.70	1.90		NA	<0.10	25	7.4	17	25	57	<0.05	5.6	0.12
MVA12	NA	2.90	3.10		NA	0.13	35	25	21	49	70	0.15	15	<0.10
Reference Sample	NA	NA	NA		NA	<0.10	19	7.5	14	28	44	0.06	5.0	<0.10
MVA3	NA	0.00	0.20		NA	0.14	32	35	13	38	95	0.16	11	0.39
MVA4	NA	0.00	0.20		NA	0.14	29	37	12	36	96	0.14	9.9	0.46
MVA5	NA	0.00	0.20		NA	0.13	23	23	10	28	75	0.09	9.3	0.27
MVA6	NA	0.00	0.20		NA	0.11	26	19	11	38	69	0.09	9.0	0.19
MVA7	NA	0.00	0.20		NA	0.20	26	20	11	39	70	0.13	9.3	0.20

----------End of Report----------

QUALITY CONTROL REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1.1 Sample Duplicate (Relative deviation)

Customer Ref. / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	Cd %	Cr %	Cu %	Ni %	Pb %	Zn %	As %	Hg %	Ag %
MVA2	NA	0.00	0.20		NA	1	2.4	4.5	0.9	3.6	2.5	1.3	0.2	11	23
MVA7	NA	0.90	1.10		NA	2	0.2	0.3	8.0	1.8	12	1.8	11	11	9.8
MVA8	NA	0.00	0.20		NA	3	8.9	5.9	5.9	2.1	11	5.5	8.5	0.1	4.0
Control Limits							+/- 30 % of the mean								

1.2 Method Spike (Standard Addition)

Customer Ref. / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	Cd %	Cr %	Cu %	Ni %	Pb %	Zn %	As %	Hg %	Ag %
MVA2	NA	0.00	0.20		NA	1	103	105	94	101	112	105	100	98	107
MVA7	NA	0.90	1.10		NA	2	104	91	94	95	120	88	99	120	109
MVA8	NA	0.00	0.20		NA	3	98	110	101	103	101	107	93	89	103
Control Limits							75 - 125 %								

Note: 1. *na = Relative deviation(RD) for duplicates cannot be evaluated as the value determined is lower than reporting limits.
2. Results are based on dry sample weight
3. < = less than

Authorized Signatory : Wong Yau Tim

Issue Date: 14 July 2006

QUALITY CONTROL REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1.3 Sample Reference Material (ISE 2004.3.2)

Reference	Sample					Batch	Cd	Cr	Cu	Ni	Pb	Zn	As	Hg	Ag
	Depth, m			Type	Specimen										
	No.	From	To		Depth m		%	%	%	%	%	%	%	%	%
ISE 2004.3.2	N/A	N/A	N/A		N/A	1	104	111	107	98	116	109	93	120	122
ISE 2004.3.2	N/A	N/A	N/A		N/A	2	120	115	116	103	124	115	102	109	114
ISE 2004.3.2	N/A	N/A	N/A		N/A	3	101	97	105	94	108	99	87	96	115
Control Limits							75 - 125% of nominal value								

1.4 Method Blank

Reference	Sample					Batch	Cd	Cr	Cu	Ni	Pb	Zn	As	Hg	Ag
	Depth, m			Type	Specimen										
	No.	From	To		Depth m		mg/kg								
N/A	N/A	N/A	N/A		N/A	1	<0.10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<0.05	<0.10
N/A	N/A	N/A	N/A		N/A	2	<0.10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<0.05	<0.10
N/A	N/A	N/A	N/A		N/A	3	<0.10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<0.05	<0.10
Control Limits							Less than reporting limit								

Note: 1. Results are based on dry sample weight
2. < = less than

TEST REPORT

Report No.	: 100081N(1)
Project Name	: Permanent Aviation Fuel Facility
Customer	: Lam Geotechnics Limited
Address	: 2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Lab Job No.	: J514
Lab Sample No.	: 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577
Sample Description	: 57 samples said to be sediment
Sample Receipt Date	: 17 June 2006 - 26 June 2006
Test Period	: 20 June 2006 - 06 July 2006

Test Information

CODE	Test Parameter	Reporting Limit ug/kg	Test Procedure
8	2,4' dichlorobiphenyl	1.0	S/O/PCB
18	2,2',5 trichlorobiphenyl	1.0	S/O/PCB
28	2,4,4' trichlorobiphenyl	1.0	S/O/PCB
44	2,2',3,5' tetrachlorobiphenyl	1.0	S/O/PCB
52	2,2',5,5' tetrachlorobiphenyl	1.0	S/O/PCB
66	2,3',4,4' tetrachlorobiphenyl	1.0	S/O/PCB
77	3,3',4,4' tetrachlorobiphenyl	1.0	S/O/PCB
101	2,2',4,5,5' pentachlorobiphenyl	1.0	S/O/PCB
105	2,3,3',4,4' pentachlorobiphenyl	1.0	S/O/PCB
118	2,3',4,4',5 pentachlorobiphenyl	1.0	S/O/PCB
126	3,3',4,4',5 pentachlorobiphenyl	1.0	S/O/PCB
128	2,2',3,3',4,4' hexachlorobiphenyl	1.0	S/O/PCB
138	2,2',3,4,4',5' hexachlorobiphenyl	1.0	S/O/PCB
153	2,2',4,4',5,5' hexachlorobiphenyl	1.0	S/O/PCB
169	3,3',4,4',5,5' hexachlorobiphenyl	1.0	S/O/PCB
170	2,2',3,3',4,4',5 heptachlorobiphenyl	1.0	S/O/PCB
180	2,2',3,4,4',5,5' heptachlorobiphenyl	1.0	S/O/PCB
187	2,2',3,4',5,5',6 heptachlorobiphenyl	1.0	S/O/PCB
Total PCB	Total PCB	1.0	S/O/PCB

Notes :
1. This report shall not be reproduced, except in full, without prior approval from Lam Laboratories Ltd.
2. Results relate to samples as received.
3. Results are based on dry sample weight.
4. < = less than
5. N/A = Not applicable
6. Test results satisfy all in-house QA/QC protocols as attached.
7. Test description (for in-house methods only) as follows:
   S/O/PCB:Ultra-Sonic extraction and GC-MS Quantification.
8. Total PCB Equals to the summary of individual reported PCBs.
9. This report supersedes the one dated 06 July 2005 with report no.100081N.

Authorized Signatory : Wong Yau Tim

Issue Date: 14 Jul. 2006

TEST REPORT

Report No. : 100081N(1)
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

Client Reference	Sample					8	18	28	44	52	66	77	101	105
Drillhole No.	Depth, m			Type	Specimen Depth m									
	No.	From	To			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
MVA2	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA2	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA2	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA2	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

TEST REPORT

Report No. : 100081N(1)
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

Client Reference	Sample					118	126	128	138	153	169	170	180	187	Total PCB
Drillhole No.	Depth, m			Type	Specimen Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	No.	From	To												
MVA2	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA2	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA2	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA2	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA1	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

TEST REPORT

Report No. : 100081N(1)
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

Client Reference	Sample					8	18	28	44	52	66	77	101	105
Drillhole No.	Depth, m			Type	Specimen									
	No.	From	To		Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
MVA7	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

TEST REPORT

Report No. : 100081N(1)
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577
Test Results

Client Reference	Sample					118	126	128	138	153	169	170	180	187	Total PCB
Drillhole No.	Depth, m			Type	Specimen Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	No.	From	To												
MVA7	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA9	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA10	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	5.80	6.00		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA13	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

TEST REPORT

Report No. : 100081N(1)
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

Client Reference	Sample					8	18	28	44	52	66	77	101	105
Drillhole No.	Depth, m			Type	Specimen Depth m	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
	No.	From	To											
MVA8	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA8	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA8	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA8	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Reference Sample	NA	NA	NA		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

TEST REPORT

Report No. : 100081N(1)
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

Client Reference	Sample					118	126	128	138	153	169	170	180	187	Total PCB
Drillhole No.	Depth, m			Type	Specimen Depth m										
	No.	From	To			ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
MVA8	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA8	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA8	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA8	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA11	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	0.90	1.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	1.70	1.90		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA12	NA	2.90	3.10		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Reference Sample	NA	NA	NA		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA3	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA4	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA5	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA6	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MVA7	NA	0.00	0.20		NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

----------End of Report----------

QUALITY CONTROL REPORT

Report No. : 100081N(1)
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577
Test Results

1.1 Sample Duplicate

Client Reference / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	8 %	18 %	28 %	44 %	52 %	66 %	77 %	101 %	105 %
R.Sediment	N/A	N/A	N/A		N/A	1	na*	na*	na*	na*	na*	na*	na*	na*	na*
R.Sediment	N/A	N/A	N/A		N/A	2	na*	na*	na*	na*	na*	na*	na*	na*	na*
R.Sediment	N/A	N/A	N/A		N/A	3	na*	na*	na*	na*	na*	na*	na*	na*	na*
Control Limit							+/- 30% of the mean								

1.2 Sample Spike (Spike Level = 1 ug)

Client Reference / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	8 %	18 %	28 %	44 %	52 %	66 %	77 %	101 %	105 %
R.Sediment	N/A	N/A	N/A		N/A	1	73	108	105	108	114	111	74	118	88
R.Sediment	N/A	N/A	N/A		N/A	2	77	101	116	103	98	96	91	108	108
R.Sediment	N/A	N/A	N/A		N/A	3	88	88	84	85	103	81	76	84	79
Control Limit							70-130 %								

Notes :

1. na* = Relative deviation (RD) for duplicates cannot be evaluated as the value determined is lower than reporting limit.

Authorized Signatory : Wong Yau Tim

Issue Date: : 14 Jul. 2006

QUALITY CONTROL REPORT

Report No.	:	100081N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1.3 Sample Duplicate

Client Reference	Sample					Batch	118	126	128	138	153	169	170	180	187
Drillhole No.	Depth, m			Type	Specimen										
	No.	From	To		Depth m		%	%	%	%	%	%	%	%	%
R.Sediment	N/A	N/A	N/A		N/A	1	na*	na*	na*	na*	na*	na*	na*	na*	na*
R.Sediment	N/A	N/A	N/A		N/A	2	na*	na*	na*	na*	na*	na*	na*	na*	na*
R.Sediment	N/A	N/A	N/A		N/A	3	na*	na*	na*	na*	na*	na*	na*	na*	na*
Control Limit							+/- 30% of the mean								

1.4 Sample Spike (Spike Level = 1 ug)

Client Reference	Sample					Batch	118	126	128	138	153	169	170	180	187
Drillhole No.	Depth, m			Type	Specimen										
	No.	From	To		Depth m		%	%	%	%	%	%	%	%	%
R.Sediment	N/A	N/A	N/A		N/A	1	95	85	94	100	98	77	81	92	91
R.Sediment	N/A	N/A	N/A		N/A	2	116	94	106	120	115	80	97	101	108
R.Sediment	N/A	N/A	N/A		N/A	3	81	112	87	91	82	86	90	89	85
Control Limit							70-130 %								

Notes :

1. na* = Relative deviation (RD) for duplicates cannot be evaluated as the value determined is lower than reporting limit.

QUALITY CONTROL REPORT

Report No.	:	100081N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

2.1 QC Sample (SETOC 2002.4.4)

Client Reference / Drillhole No.	Batch	28 %	52 %	101 %	105 %	118 %	128 %	138 %	153 %	180 %
SETOC 2002.4.4	1	99	114	116	114	98	89	100	109	98
SETOC 2002.4.4	2	102	100	100	108	110	100	99	84	108
SETOC 2002.4.4	3	120	113	84	97	104	95	99	105	94
Control Limit		70 - 130% of nominal value								

2.2 Method Blank

Client Reference / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	8 ug/kg	18 ug/kg	28 ug/kg	44 ug/kg	52 ug/kg	66 ug/kg	77 ug/kg	101 ug/kg	105 ug/kg
N/A	N/A	N/A	N/A		N/A	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
N/A	N/A	N/A	N/A		N/A	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
N/A	N/A	N/A	N/A		N/A	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Control Limit							less than reporting limit								

Client Reference / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	118 ug/kg	126 ug/kg	128 ug/kg	138 ug/kg	153 ug/kg	169 ug/kg	170 ug/kg	180 ug/kg	187 ug/kg
N/A	N/A	N/A	N/A		N/A	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
N/A	N/A	N/A	N/A		N/A	2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
N/A	N/A	N/A	N/A		N/A	3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Control Limit							less than reporting limit								

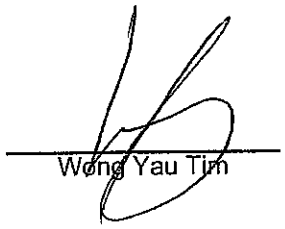
TEST REPORT

Report No.	: 100082N
Project Name	: Permanent Aviation Fuel Facility
Customer	: Lam Geotechnics Limited
Address	: 2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Lab Job No.	: J514
Lab Sample No.	: 17519,17577
Sample Description	: 4 liquid samples said to be water
Sample Receipt Date	: 19 June 2006 - 26 June 2006
Test Period	: 20 June 2006 - 06 July 2006

Test Information

CODE	Test Parameter	Reporting Limit ug/L	Test Procedure
TBT	Tri-Butyl Tin	0.015	W/O/TBT

Notes :
1. This report shall not be reproduced, except in full, without prior approval from Lam Laboratories Ltd.
2. < = less than
3. N/A = Not applicable
4. Test results satisfy all in-house QA/QC protocols as attached.
5. Test description (for in-house methods) as follows:
   W/O/TBT: Solvent extraction and GC-MS Quantification.

Authorized Signator : 
Wong Yau Tim

Issue Date: 06 Jul. 2006

TEST REPORT

Report No.	:	100082N
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17519,17577

Test Results

Client Reference / Drillhole No.	Sample					TBT
	Depth, m			Type	Specimen Depth m	ug TBT / L
	No.	From	To			
MVA2	N/A	N/A	N/A		Seabed	<0.015
MVA14	N/A	N/A	N/A		Seabed	<0.015
MVA1	N/A	N/A	N/A		Seabed	<0.015
Reference Sample	N/A	N/A	N/A		N/A	<0.015

----------End of report----------

QUALITY CONTROL REPORT

Report No. : 100082N
Project Name : Permanent Aviation Fuel Facility
Customer : Lam Geotechnics Limited
Lab Job No. : J514
Lab Sample No. : 17519,17577
Test Results

1.1 Sample Duplicate (Relative deviation)

Client Reference	Sample					Batch	TBT
Drillhole No.	Depth, m			Type	Specimen Depth m		%
	No.	From	To				
Reference Sample	N/A	N/A	N/A		N/A	1	na*
Control Limit							+/- 30% of the mean

1.2 Sample Spike (Spike Level = 50 ng)

Client Reference	Sample					Batch	TBT
Drillhole No.	Depth, m			Type	Specimen Depth m		%
	No.	From	To				
Reference Sample	N/A	N/A	N/A		N/A	1	85
Control Limit							70-130 %

Notes :

1. na* = Relative deviation (RD) for duplicates cannot be evaluated as the value determined is lower than reporting limit.

Authorized Signatory : Wong Yau Tim

Issue Date: 06 Jul. 2006

QUALITY CONTROL REPORT

Report No.	:	100082N
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17519,17577

Test Results

1.3 QC Sample (Spike level = 50 ng)

Client Reference	Sample					Batch	TBT
Drillhole No.	Depth, m			Type	Specimen Depth m		
	No.	From	To				%
MB Spike	N/A	N/A	N/A		N/A	1	101
Control Limit							+/- 30% of the mean

1.4 Method Blank

Client Reference	Sample					Batch	TBT
Drillhole No.	Depth, m			Type	Specimen Depth m		
	No.	From	To				ug TBT / L
N/A	N/A	N/A	N/A		N/A	1	<0.015
Control Limit							Less than reporting limit

TEST REPORT

Report No.	: 100062N(1)
Project Name	: Permanent Aviation Fuel Facility
Customer	: Lam Geotechnics Limited
Address	: 2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Lab Job No.	: J514
Lab Sample No.	: 17509,17513,17519,17528,17540,17548,17557,17569,17563,17577
Sample Description	: 57 samples said to be sediment
Sample Receipt Date	: 17 June 2006 - 26 June 2006
Test Period	: 20 June 2006 - 5 July 2006

Test Information

Code	Test Parameter	Reporting Limits Sediment/Soil mg/kg	Test Procedure
Cd	Cadmium	0.10	S/M/DIG-RAR & M/ICP-MS
Cr	Chromium	1.0	S/M/DIG-RAR & M/ICP-MS
Cu	Copper	1.0	S/M/DIG-RAR & M/ICP-MS
Ni	Nickel	1.0	S/M/DIG-RAR & M/ICP-MS
Pb	Lead	1.0	S/M/DIG-RAR & M/ICP-MS
Zn	Zinc	10	S/M/DIG-RAR & M/ICP-MS
Hg	Mercury	0.05	S/M/DIG-RAR & M/ICP-MS
As	Arsenic	1.0	S/M/DIG-RAR & M/ICP-MS
Ag	Silver	0.10	S/M/DIG-RAR & M/ICP-MS

Notes :
1. This report shall not be reproduced, except in full, without prior approval from Lam Laboratories Ltd.
2. Results related to samples as received.
3. Results are based on dry sample weight.
4. < = less than
5. N/A = Not applicable
6. Test results satisfy all in-house QA/QC protocols as attached.
7. Test description (for in-house methods) as follows:
   S/M/DIG-RAR: Acid digestion.
   M/ICP-MS: ICP-MS Quantification.
8. This report supersedes the one dated 06 July 2005 with report no.100062N.

Authorized Signatory : Wong Yau Tim

Issue Date: 14 July 2006

TEST REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Result

Customer Ref.	Sample					Cd	Cr	Cu	Ni	Pb	Zn	Hg	As	Ag
Drillhole No.	Depth, m			Type	Specimen									
	No.	From	To		Depth, m	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MVA2	NA	0.00	0.20		NA	0.16	38	39	22	47	99	0.15	12	0.70
MVA2	NA	0.90	1.10		NA	0.15	33	24	20	46	71	0.22	17	0.12
MVA2	NA	1.70	1.90		NA	0.12	25	11	16	84	56	0.12	10	<0.10
MVA2	NA	2.90	3.10		NA	0.12	26	11	16	27	56	0.10	10	<0.10
MVA1	NA	0.00	0.20		NA	0.18	43	69	25	69	100	0.19	12	0.42
MVA1	NA	0.90	1.10		NA	0.16	33	22	19	52	73	0.22	17	0.12
MVA1	NA	1.70	1.90		NA	0.14	29	12	18	32	62	0.69	13	<0.10
MVA1	NA	2.90	3.10		NA	0.09	18	6.2	10	22	33	0.07	7.3	0.19
MVA3	NA	0.90	1.10		NA	0.19	49	72	26	66	120	0.22	14	0.41
MVA3	NA	1.70	1.90		NA	0.05	13	7.3	13	53	30	0.06	3.8	<0.10
MVA3	NA	2.90	3.10		NA	0.12	49	12	18	31	62	0.10	11	<0.10
MVA3	NA	5.80	6.00		NA	0.11	11	5.2	5.1	17	27	0.06	4.8	<0.10
MVA4	NA	0.90	1.10		NA	0.13	27	29	16	48	85	0.15	11	0.33
MVA4	NA	1.70	1.90		NA	0.12	30	21	17	47	68	0.40	14	<0.10
MVA4	NA	2.90	3.10		NA	0.15	24	10	15	41	55	0.09	10	<0.10
MVA4	NA	5.80	6.00		NA	0.06	8.9	3.9	6.4	13	23	<0.05	8.4	<0.10
MVA5	NA	0.90	1.10		NA	0.13	25	23	14	42	79	0.10	10	0.30
MVA5	NA	1.70	1.90		NA	0.13	24	24	14	34	86	0.25	9.1	0.32
MVA5	NA	2.90	3.10		NA	0.13	26	12	16	32	59	0.16	11	<0.10
MVA5	NA	5.80	6.00		NA	0.01	9.0	2.9	4.5	16	20	0.06	3.5	<0.10

TEST REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Result

Customer Ref.	Sample					Cd	Cr	Cu	Ni	Pb	Zn	Hg	As	Ag
Drillhole No.	Depth, m			Type	Specimen									
	No.	From	To		Depth, m	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MVA7	NA	0.90	1.10		NA	0.13	32	18	19	44	78	0.08	10	0.20
MVA7	NA	1.70	1.90		NA	0.10	22	8.7	13	37	47	0.09	7.5	<0.10
MVA7	NA	2.90	3.10		NA	<0.10	25	10	14	26	51	0.09	7.4	0.13
MVA7	NA	5.80	6.00		NA	<0.10	9.0	3.4	5.1	11	18	0.09	4.7	<0.10
MVA9	NA	0.00	0.20		NA	0.15	40	30	24	47	77	0.21	16	0.13
MVA9	NA	0.90	1.10		NA	<0.10	23	6.4	13	34	47	0.05	7.0	<0.10
MVA9	NA	1.70	1.90		NA	<0.10	24	5.3	13	30	50	<0.05	6.5	<0.10
MVA9	NA	2.90	3.10		NA	0.14	30	13	18	32	60	0.09	11	<0.10
MVA10	NA	0.00	0.20		NA	0.16	43	35	26	50	88	0.19	17	0.16
MVA10	NA	0.90	1.10		NA	<0.10	26	9.3	15	35	52	0.05	7.1	<0.10
MVA10	NA	1.70	1.90		NA	<0.10	23	4.6	13	30	46	<0.05	7.2	<0.10
MVA10	NA	2.90	3.10		NA	0.14	30	13	18	46	59	0.07	10	<0.10
MVA6	NA	0.90	1.10		NA	0.13	24	22	14	35	74	0.09	10	0.25
MVA6	NA	1.70	1.90		NA	0.17	24	21	14	29	69	0.09	10	0.26
MVA6	NA	2.90	3.10		NA	0.13	27	12	17	32	59	0.06	9.3	<0.10
MVA6	NA	5.80	6.00		NA	<0.10	13	5.3	8.0	16	27	<0.05	4.8	<0.10
MVA13	NA	0.00	0.20		NA	0.17	37	41	23	55	99	0.13	15	0.33
MVA13	NA	0.90	1.10		NA	0.17	40	34	23	52	86	0.18	17	0.17
MVA13	NA	1.70	1.90		NA	<0.10	18	11	17	41	61	0.06	8.7	<0.10
MVA13	NA	2.90	3.10		NA	<0.10	24	6.4	15	23	52	<0.05	5.1	<0.10

TEST REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Result

Customer Ref.	Sample					Cd	Cr	Cu	Ni	Pb	Zn	Hg	As	Ag
Drillhole No.	Depth, m			Type	Specimen Depth, m	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
	No.	From	To											
MVA8	NA	0.00	0.20		NA	0.16	33	25	20	40	79	0.11	13	0.18
MVA8	NA	0.90	1.10		NA	0.15	36	37	22	45	93	0.18	12	0.23
MVA8	NA	1.70	1.90		NA	0.12	33	22	20	40	66	0.11	13	<0.10
MVA8	NA	2.90	3.10		NA	<0.10	23	8.8	16	35	53	0.05	7.5	<0.10
MVA11	NA	0.00	0.20		NA	0.14	35	28	22	53	72	0.48	16	0.12
MVA11	NA	0.90	1.10		NA	0.13	30	19	19	38	61	0.12	13	<0.10
MVA11	NA	1.70	1.90		NA	<0.10	25	11	16	35	56	0.06	8.0	<0.10
MVA11	NA	2.90	3.10		NA	<0.10	28	7.6	18	31	63	0.05	7.5	<0.10
MVA12	NA	0.00	0.20		NA	<0.10	28	9.3	20	44	63	0.05	4.9	<0.10
MVA12	NA	0.90	1.10		NA	<0.10	25	10	15	36	55	0.07	8.3	<0.10
MVA12	NA	1.70	1.90		NA	<0.10	25	7.4	17	25	57	<0.05	5.6	0.12
MVA12	NA	2.90	3.10		NA	0.13	35	25	21	49	70	0.15	15	<0.10
Reference Sample	NA	NA	NA		NA	<0.10	19	7.5	14	28	44	0.06	5.0	<0.10
MVA3	NA	0.00	0.20		NA	0.14	32	35	13	38	95	0.16	11	0.39
MVA4	NA	0.00	0.20		NA	0.14	29	37	12	36	96	0.14	9.9	0.46
MVA5	NA	0.00	0.20		NA	0.13	23	23	10	28	75	0.09	9.3	0.27
MVA6	NA	0.00	0.20		NA	0.11	26	19	11	38	69	0.09	9.0	0.19
MVA7	NA	0.00	0.20		NA	0.20	26	20	11	39	70	0.13	9.3	0.20

----------End of Report----------

QUALITY CONTROL REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1.1 Sample Duplicate (Relative deviation)

Customer Ref. / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	Cd %	Cr %	Cu %	Ni %	Pb %	Zn %	As %	Hg %	Ag %
MVA2	NA	0.00	0.20		NA	1	2.4	4.5	0.9	3.6	2.5	1.3	0.2	11	23
MVA7	NA	0.90	1.10		NA	2	0.2	0.3	8.0	1.8	12	1.8	11	11	9.8
MVA8	NA	0.00	0.20		NA	3	8.9	5.9	5.9	2.1	11	5.5	8.5	0.1	4.0
Control Limits							+/- 30 % of the mean								

1.2 Method Spike (Standard Addition)

Customer Ref. / Drillhole No.	Sample Depth, m No.	From	To	Type	Specimen Depth m	Batch	Cd %	Cr %	Cu %	Ni %	Pb %	Zn %	As %	Hg %	Ag %
MVA2	NA	0.00	0.20		NA	1	103	105	94	101	112	105	100	98	107
MVA7	NA	0.90	1.10		NA	2	104	91	94	95	120	88	99	120	109
MVA8	NA	0.00	0.20		NA	3	98	110	101	103	101	107	93	89	103
Control Limits							75 - 125 %								

Note: 1. *na = Relative deviation(RD) for duplicates cannot be evaluated as the value determined is lower than reporting limits.
2. Results are based on dry sample weight
3. < = less than

Authorized Signatory : Wong Yau Tim

Issue Date: 14 July 2006

QUALITY CONTROL REPORT

Report No.	:	100062N(1)
Project Name	:	Permanent Aviation Fuel Facility
Customer	:	Lam Geotechnics Limited
Lab Job No.	:	J514
Lab Sample No.	:	17509,17513,17519,17528,17540,17548,17557,17569,17563,17577

Test Results

1.3 Sample Reference Material (ISE 2004.3.2)

Reference	Sample					Batch	Cd	Cr	Cu	Ni	Pb	Zn	As	Hg	Ag
	Depth, m			Type	Specimen										
	No.	From	To		Depth m		%	%	%	%	%	%	%	%	%
ISE 2004.3.2	N/A	N/A	N/A		N/A	1	104	111	107	98	116	109	93	120	122
ISE 2004.3.2	N/A	N/A	N/A		N/A	2	120	115	116	103	124	115	102	109	114
ISE 2004.3.2	N/A	N/A	N/A		N/A	3	101	97	105	94	108	99	87	96	115
Control Limits							75 - 125% of nominal value								

1.4 Method Blank

Reference	Sample					Batch	Cd	Cr	Cu	Ni	Pb	Zn	As	Hg	Ag
	Depth, m			Type	Specimen										
	No.	From	To		Depth m		mg/kg								
N/A	N/A	N/A	N/A		N/A	1	<0.10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<0.05	<0.10
N/A	N/A	N/A	N/A		N/A	2	<0.10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<0.05	<0.10
N/A	N/A	N/A	N/A		N/A	3	<0.10	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<0.05	<0.10
Control Limits							Less than reporting limit								

Note: 1. Results are based on dry sample weight
2. < = less than

Annex C

Biological Test Results

TEST REPORT

Report No.	:	100499N
Project Name	:	Permanent Aviation Fuel Facility
Customer Name	:	Lam Geotechnics Limited
Customer Address	:	2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Contract No.	:	N/A
Works Order No.	:	N/A
Lab. Job No.	:	J514
Lab. Sample Ref. No.	:	17339/1-11
No. of Sample(s) & Description	:	17 no. of samples stated as sediment were received on chilled condition 11 no. of samples were tested including 10 composite samples 1-10 & reference sediment
Sample Receive Date	:	16-26 Jun, 2006
Test Date	:	25 Jul - 14 Aug, 2006

Test Parameter

Parameter	Test Method
Polychaete Sediment Bioassay	PSEP 1995

Note(s):
1. Uncertainty is calculated as 2 SD.
2. Standard method: Puget Sound Estuary Program Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments, USEPA, Revised July 1995.
3. N/A = Not applicable.

Signatory: Yi Zhang **Date:** 31-Aug-2006

Lam Laboratories Limited Room 1412, Honour Industrial Centre, 6 Sun Yip Street, Chaiwan, Hong Kong.
Tel: (852) 2897 3282 Fax: (852) 2897 5509 Email: info@lamlab.com

Report No.: 100499N

1. Method

This 20-day toxicity test on sediment with Neanthes arenaceodentata was conducted using the PSEP method (1995) "Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments". *Neanthes arenaceodentata* is exposed to the test sediment overlaid with seawater for a 20-day test period. The endpoints are survival and growth.

2. Sample storage and pretreatment

All samples were homogenized thoroughly. Debris and indigenous organisms present in the sediment were removed and the sediment samples were stored at 4oC in dark until analyzed.

3. Test organism

Species:	*Neanthes arenaceodentata*
Source:	Purchased from research organism supplier from USA, mortality during shipping was 0%
Age/size:	2-3 weeks post emergence
Acclimation:	under test conditions with feeding provided, as per USEPA 1994, mortality during acclimation was 0%
Health condition:	healthy
Mean initial dry weight:	0.71 mg/worm

4. Summary of test particulars

Type of test:	renewal every three days
Duration:	25 Jul -14 Aug, 2006
Control sediment:	mud and sand collected from a clean area on the eastern coast of the New Territories and Hong Kong Island respectively, shipped to the laboratory on the same day, sieved through 425 micrometer mesh sieve, mixed and stored at 4°C in dark dark until use
Control seawater:	reconstituted seawater prepared with the Instant Ocean salt at 28 ppt, aerated for two days after preparation
Test temperature:	20±1°C
Lighting:	continuous
Aeration:	provided (around 100 bubbles/min)
Test vessel:	1000ml glass jars
Volume of sediment:	175ml
Volume of overlying water:	775 ml
No. of replicates:	5
No. of organisms/replicate:	5
Feeding:	Tetramarin powder, 8 mg per worm each time, once every two days
Monitoring:	temperature, DO, pH and salinity in overlying water everyday, ammonia in overlying water at test initiation and termination
Reference toxicant test:	96 hour water only test with $CdCl_2$

Report No.: 100499N

5. Summary of test results

Table 1. Survival of polychaetes on Day 20

Sample ID	Number of living polychaete on Day 20						
	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5	Mean	SD
Negative control with sediment	5	5	5	5	5	5.0	0.0
Composite Sample 1	5	5	5	5	5	5.0	0.0
Composite Sample 2	4	4	5	5	5	4.6	0.5
Composite Sample 3	5	4	5	5	5	4.8	0.4
Composite Sample 4	5	5	5	5	5	5.0	0.0
Composite Sample 5	4	5	5	5	5	4.8	0.4
Composite Sample 6	5	5	5	5	5	5.0	0.0
Composite Sample 7	3	5	4	4	5	4.2	0.8
Composite Sample 8	5	4	5	5	5	4.8	0.4
Composite Sample 9	5	5	4	5	5	4.8	0.4
Composite Sample 10	5	5	5	5	5	5.0	0.0
Reference sediment	5	5	5	5	4	4.8	0.4

Table 2. Survival percentage of polychaetes on Day 20

Sample ID	Survival percentage of polychaete on Day 20 (%)						
	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5	Mean	SD
Negative control with sediment	100	100	100	100	100	100.0	0.0
Composite Sample 1	100	100	100	100	100	100.0	0.0
Composite Sample 2	80	80	100	100	100	92.0	11.0
Composite Sample 3	100	80	100	100	100	96.0	8.9
Composite Sample 4	100	100	100	100	100	100.0	0.0
Composite Sample 5	80	100	100	100	100	96.0	8.9
Composite Sample 6	100	100	100	100	100	100.0	0.0
Composite Sample 7	60	100	80	80	100	84.0	16.7
Composite Sample 8	100	80	100	100	100	96.0	8.9
Composite Sample 9	100	100	80	100	100	96.0	8.9
Composite Sample 10	100	100	100	100	100	100.0	0.0
Reference sediment	100	100	100	100	80	96.0	8.9

Report No.: 100499N

Table 3. Total dry weight of polychaetes on Day 20

Sample ID	Total dry weight of polychaete on Day 20 (mg)						
	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5	Mean	SD
Negative control with sediment	64.92	67.44	65.36	65.92	65.92	65.9	1.0
Composite Sample 1	19.07	10.58	27.83	53.82	59.48	34.2	21.5
Composite Sample 2	16.41	21.56	35.65	21.06	41.26	27.2	10.7
Composite Sample 3	48.70	38.21	42.74	52.80	44.64	45.4	5.6
Composite Sample 4	49.30	72.04	72.29	58.00	60.71	62.5	9.8
Composite Sample 5	32.61	43.31	53.17	55.36	47.97	46.5	9.1
Composite Sample 6	49.71	41.31	41.01	45.64	50.78	45.7	4.6
Composite Sample 7	13.24	35.31	25.30	42.01	47.75	32.7	13.7
Composite Sample 8	30.02	36.49	43.15	17.08	39.49	33.2	10.2
Composite Sample 9	29.19	21.89	32.86	39.06	34.73	31.5	6.5
Composite Sample 10	48.91	75.34	46.31	46.80	49.62	53.4	12.3
Reference sediment	67.68	43.27	27.68	71.70	23.64	46.8	22.2

Table 4. Summary of the total dry weight of polychaetes in relation to the reference sediments

Sample ID	Total dry weight in relation to reference site (%)	Difference between sample and reference sediment (t-test)
Composite Sample 1	73.0	Insignificantly different, t critical=1.86, t stat=-4.714, p=0.1937 (one tail)
Composite Sample 2	58.1	Insignificantly different, t critical=1.86, t stat=-1.780, p=0.0564 (one tail)
Composite Sample 3	97.1	NA [1]
Composite Sample 4	133.5	NA [1]
Composite Sample 5	99.3	NA [1]
Composite Sample 6	97.6	NA [1]
Composite Sample 7	69.9	Insignificantly different, t critical=1.86, t stat=-1.206, p=0.1312 (one tail)
Composite Sample 8	71.0	Insignificantly different, t critical=1.86, t stat=-1.239, p=0.1252 (one tail)
Composite Sample 9	67.4	Insignificantly different, t critical=2.02, t stat=-1.475, p=0.1001 (one tail)
Composite Sample 10	114.1	NA [1]
NA [1]. As the average tatol dry wieght of the polycheates for the test sediment was no less than 90% of that of the reference sediment, statistical analysis is not required.		

Report No.: 100499N

6. Test validity

Table 5. Test validity criteria and water quality ranges in the polychaete test

Parameter	Minimum during the test period	Maximum during the test period	Control Limit
Overlying salinity	27 ppt	29 ppt	26-30 ppt
Dissolved oxygen	6.1 mg/L	7.2 mg/L	not specified
Overlying pH	7.6	8.4	NA [1]
Temperature	19.0 °C	21.0 °C	19-21°C
Unionized ammonia in overlying water (initiation/termination)	0.0043 mg/L	0.289 mg/L	NA [2]
Interstitial salinity (initiation/termination)	27 ppt	34 ppt	>20ppt
Interstitial pH (initiation/termination)	7.5	8.0	NA [1]
Polychaete survival in the negative control	All 100% , averagely 100%		≥ 90% average ≥ 80% in any individual replicate
96-h LC_{50} obtained from the reference toxicant test	10.67 mg/L		9.89±3.20 mg/L

1. pH is not adjusted or controlled
2. Overlying ammonia is not controlled. Results could be qualified as possible false positive when unionized ammonia greater than 0.7 mg/L

As shown in Table 5, the water quality parameters during the test period ranged within acceptable limits: temperature ranged from 19.0 to 21.0 °C, the salinity ranged from 27 to 29 ppt. As a result, the data are interpretable.

The tests were validated by acceptable survival of control organisms. The average survival rate in controls was greater than 90% and survival rate in any control replicates greater than 80%.

The organisms also demonstrated comparable sensitivity to the reference toxicant (cadmium). The 96-hr LC_{50} for *Neanthes arenaceodentata* obtained was 10.67 mgCd/L and found within the laboratory control limits (Mean±2STD, i.e., 9.89±3.20 mgCd/L). Therefore, the data are acceptable.

End of report

Data entry checked by: _____
Y.M.Choy

Test report

Report No.	:	100497N
Project Name	:	Permanent Aviation Fuel Facility
Customer Name	:	Lam Geotechnics Limited
Customer Address	:	2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Contract No.	:	N/A
Works Order No.	:	N/A
Lab. Job No.	:	J514
Lab. Sample Ref. No.	:	17339/1-11
No. of Sample(s) & Description	:	17 no. of samples stated as sediment were received on chilled condition 11 no. of samples were tested including 10 composite samples 1-10 & reference sediment
Sample Receive Date	:	16-26 Jun, 2006
Test Date	:	1-11 Aug, 2006

Test Parameter

Parameter	Test Method
Amphipod Sediment Bioassay	USEPA 1994

Note(s):

1. Uncertainty is calculated as 2 SD.
2. Standard Method: Methods for Assessing Toxicity of Sediment-associated Contaminants with Estuarine and Marine Amphipods. EPA/600/R-94/025, USEPA, 1994.
3. N/A = Not applicable.

Signatory: Yi Zhang **Date:** 31-Aug-2006

Report no.: 100497N

1. Method

This 10-day toxicity test with Leptocheirus plumulosus was conducted using the USEPA method (1994) "Methods for Assessing the Toxicity of Sediment-associated Contaminants with Estuarine and Marine Amphipods". Leptocheirus plumulosus is exposed to the test sediment overlaid with seawater for a 10-day test period and survival rate is determined as the primary endpoint.

2. Sample storage and pretreatment

All samples were homogenized thoroughly. Debris and indigenous organisms present in the sediment were removed and the sediment samples were stored at 4°C in dark until analyzed.

3. Test organism

Species:	*Leptocheirus plumulosus*
Source:	Purchased from research organism supplier from USA, mortality during shipping was 2.56%
Size/age:	3-4 mm in length
Acclimation:	under test conditions with feeding provided, as per USEPA 1994, mortality during acclimation was 4.44%
Health condition:	healthy

4. Summary of test particulars

Type of test:	static
Duration:	1-11 Aug, 2006
Control sediment:	mud and sand collected from a clean area on the eastern coast of the New Territories and Hong Kong Island respectively, shipped to the laboratory on the same day, sieved through 425 micrometer mesh sieve, mixed and stored at 4°C in dark dark until use
Control seawater:	reconstituted seawater prepared with the Instant Ocean salt at 20 ppt, aerated for two days after preparation
Test temperature:	25±1°C
Lighting:	continuous
Aeration:	provided (around 100 bubbles/min)
Test vessel:	1000ml glass jars
Volume of sediment:	175ml
Volume of overlying water:	775 ml
No. of replicates:	5
No. of organisms/replicate:	20
Feeding:	none
Monitoring:	temperature, DO, pH and salinity in overlying water everyday, ammonia in overlying water at test initiation and termination
Reference toxicant test:	96 hour water only test with $CdCl_2$

Report no.: 100497N

5. Summary of test results

Table 1. Survival of amphipods on Day 10

Sample ID	Number of living amphipod on Day 10						
	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5	Mean	SD
Negative Control with sediment	18	18	18	18	18	18.0	0.0
Composite Sample 1	17	17	17	16	15	16.4	0.9
Composite Sample 2	14	14	11	12	15	13.2	1.6
Composite Sample 3	16	18	18	17	17	17.2	0.8
Composite Sample 4	15	17	16	17	16	16.2	0.8
Composite Sample 5	15	17	18	17	15	16.4	1.3
Composite Sample 6	17	18	16	16	17	16.8	0.8
Composite Sample 7	16	13	14	15	16	14.8	1.3
Composite Sample 8	17	15	17	14	17	16.0	1.4
Composite Sample 9	17	16	15	17	16	16.2	0.8
Composite Sample 10	17	16	20	17	19	17.8	1.6
Reference sediment	19	18	18	19	18	18.4	0.5

Table 2. Survival percentage of amphipods on Day 10

Sample ID	Survival percentage of amphipod on Day 10 (%)						
	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5	Mean	SD
Negative Control with sediment	90	90	90	90	90	90.0	0.0
Composite Sample 1	85	85	85	80	75	82.0	4.5
Composite Sample 2	70	70	55	60	75	66.0	8.2
Composite Sample 3	80	90	90	85	85	86.0	4.2
Composite Sample 4	75	85	80	85	80	81.0	4.2
Composite Sample 5	75	85	90	85	75	82.0	6.7
Composite Sample 6	85	90	80	80	85	84.0	4.2
Composite Sample 7	80	65	70	75	80	74.0	6.5
Composite Sample 8	85	75	85	70	85	80.0	7.1
Composite Sample 9	85	80	75	85	80	81.0	4.2
Composite Sample 10	85	80	100	85	95	89.0	8.2
Reference sediment	95	90	90	95	90	92.0	2.7

Report no.: 100497N

Table 3. Summary of the amphipod survival in relation to the reference sediment

Sample ID	Survival in relation to reference site (%)	Difference between sample and reference sediment (t-test)
Composite Sample 1	89.1	NA [1]
Composite Sample 2	71.7	Significantly different, t critical=2.01, t stat=-6.713, p=0.0006 (one tail)
Composite Sample 3	93.5	NA [1]
Composite Sample 4	88.0	NA [1]
Composite Sample 5	89.1	NA [1]
Composite Sample 6	91.3	NA [1]
Composite Sample 7	80.4	NA [1]
Composite Sample 8	87.0	NA [1]
Composite Sample 9	88.0	NA [1]
Composite Sample 10	96.7	NA [1]

NA [1]. As the average survival of the amphipods for the test sediment was no less than 80% of that of the reference sediment, statistical analysis is not required.

Report no.: 100497N

6, Test validity

Table 4. Test validity criteria and water quality ranges in the amphipod test

Parameter	Minimum during the test period	Maximum during the test period	Acceptable Range in USEPA 1994
Overlying salinity	19 ppt	21 ppt	19-21 ppt
Dissolved oxygen	6.1 mg/L	7.1 mg/L	>4.7 mg/L [1]
Overlying pH	8.0	8.4	NA [2]
Temperature	24.0 °C	25.9 °C	22.0-28.0 °C time-average 24.0-26.0 °C
Total ammonia in overlying water (initiation / termination)	0.03 mg/L	7.66 mg/L	<60 mg/L [3]
Interstitial salinity (initiation)	27 ppt	29 ppt	1.5-32 ppt [4]
Interstitial pH (initiation)	7.6	7.9	NA [2]
Amphipod survival in the negative control	90% , averagely 90.0 %		≥ 90% average ≥ 80% in any individual replicate
96-h LC_{50} obtained from the reference toxicant test	0.99 mg/L		0.92±0.41 mg/L

1. 60% of saturation level at 20 ppt
2. pH is not adjusted or controlled
3. The acceptance level for overlying ammonia was < 20 mg/L in ETWB TCW 34/2002. When this level is exceeded, additional set of amphipod test is conducted with purging of sediment.
4. The reference sediment was pre-mixed with 20 ppt reconstituted seawater, so that interstitial salinity was below 32 ppt at test initiation.

Report no.: 100497N

As shown in Table 4, the water quality parameters during the test period ranged within acceptable limits: temperature ranged from 24.0 to 25.9 °C, the dissolved oxygen level ranged from 6.1 to 7.1 mg/L, pH ranged from 8.0 to 8.4, the salinity ranged from 19 to 21 ppt. As a result, the data are interpretable.

The tests were validated by acceptable survival of control organisms. The average survival rate in controls was no less than 90% and survival rate in any control replicates no less than 80%.

The organisms also demonstrated comparable sensitivity to the reference toxicant (cadmium). The 96-hr LC_{50} for *Leptocheirus plumulosus* obtained was 0.99 mgCd/L and found within the laboratory control limits (Mean± 2STD, i.e., 0.92±0.41 mgCd/L). Therefore, the data are acceptable.

End of report

Data entry checked by: Y.M. Choy

TEST REPORT

Report No.	:	100498N
Project Name	:	Permanent Aviation Fuel Facility
Customer Name	:	Lam Geotechnics Limited
Customer Address	:	2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Contract No.	:	N/A
Works Order No.	:	N/A
Lab. Job No.	:	J 514
Lab. Sample Ref. No.	:	17339/1-11
No. of Sample(s) & Description	:	17 no. of samples stated as sediment were received on chilled condition 11 no. of samples were tested including 10 composite samples 1-10 & reference sediment
Sample Receive Date	:	16-26 Jun, 2006
Test Date	:	31 Jul -2 Aug, 2006

Test Parameter

Parameter	Test Method
Bivalve Larvae Sediment Bioassay	PSEP 1995

Note(s):

1. Uncertainty is calculated as 2 SD.
2. Standard method: Puget Sound Estuary Program Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments, USEPA, Revised July 1995.
3. N/A = Not applicable.

Signatory: Yi Zhang **Date**: 31-Aug-2006

Report No.: 100498N

1. Method

This bivalve larvae test with Crassostrea gigas was conducted using the PSEP method (1995) "Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments". Bivalve adults are induced to spawn and gametes are fertilized. After fertilization the embryos are immediately exposed to the test sediment overlaid with seawater and allowed to develop for 48-60 hours. The normality survival of larvae is determined as endpoint.

2. Sample storage and pretreatment

All samples were homogenized thoroughly. Debris and indigenous organisms present in the sediment were removed and the sediment samples were stored at 4oC in dark until analyzed.

3. Test organism

Species:	*Crassostrea gigas*
Source:	purchased from a research organism supplier in UK
Acclimation:	24 hours under test conditions, as per PSEP 1995, mortality during acclimation was 0 %
Conditions of eggs:	mature and clean
Conditions of sperms:	active
Fertilization rate:	92.8%
Mean initial stocking:	25260 fertilized eggs per test chamber

4. Summary of test particulars

Type of test:	static and non-renewal
Duration:	31 Jul- 2 Aug 2006, 48 hours in total
Control seawater:	collected from a clean area on the eastern coast of the Hong Kong Island, filtered through 0.45 mm filter paper, adjusted to 28 ppt, aerated for two days after preparation
Test temperature:	20±1°C
Lighting:	14h light : 10h dark cycle
Aeration:	provided (around 100 bubbles/min)
Test vessel:	1000ml glass jars
Volume of sediment:	18g
Volume of overlying water:	900 ml
No. of replicates:	5
Feeding:	none
Monitoring:	temperature, DO, pH and salinity in overlying water everyday, and termination ammonia in overlying water at test initiation
Reference toxicant test:	48 hour water only test with $CdCl_2$

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5. Summary of test results

Table 1. Total number of normal larvae in each test chamber at test termination

Sample ID	Number of normal larvae in each test chamber at test termination						
	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5	Mean	SD
Negative Control with Seawater I	18900	18700	16500	18400	17600	18020.0	983.4
Negative Control with Seawater II	19800	18100	17900	17100	20100	18600.0	1292.3
Composite Sample 1	13800	12100	11900	12100	12000	12380.0	798.1
Composite Sample 2	11300	13200	12300	12400	12600	12360.0	687.7
Composite Sample 3	15400	15000	14800	11600	12300	13820.0	1738.4
Composite Sample 4	14100	13800	12500	12000	12000	12880.0	1003.5
Composite Sample 5	17100	23500	17400	17000	17600	18520.0	2794.1
Composite Sample 6	21600	17200	20200	20000	19700	19740.0	1596.2
Composite Sample 7	21100	18000	18500	19300	20000	19380.0	1227.6
Composite Sample 8	21900	18700	20100	21100	20100	20380.0	1205.0
Composite Sample 9	15600	15500	14900	16200	15400	15520.0	465.8
Composite Sample 10	16700	19200	18200	17800	18200	18020.0	901.1
Reference sediment	17200	17600	16200	20000	17800	17760.0	1395.7

Table 2. Combined normality/survival of the bivalve larvae at test termination

Sample ID	Normality survival of bivalve larvae at test termination (%)						
	Replicate 1	Replicate 2	Replicate 3	Replicate 4	Replicate 5	Mean	SD
Negative Control with Seawater I	74.8	74.0	65.3	72.8	69.7	71.3	3.9
Negative Control with Seawater II	78.4	71.7	70.9	67.7	79.6	73.6	5.1
Composite Sample 1	54.6	47.9	47.1	47.9	47.5	49.0	3.2
Composite Sample 2	44.7	52.3	48.7	49.1	49.9	48.9	2.7
Composite Sample 3	61.0	59.4	58.6	45.9	48.7	54.7	6.9
Composite Sample 4	55.8	54.6	49.5	47.5	47.5	51.0	4.0
Composite Sample 5	67.7	93.0	68.9	67.3	69.7	73.3	11.1
Composite Sample 6	85.5	68.1	80.0	79.2	78.0	78.1	6.3
Composite Sample 7	83.5	71.3	73.2	76.4	79.2	76.7	4.9
Composite Sample 8	86.7	74.0	79.6	83.5	79.6	80.7	4.8
Composite Sample 9	61.8	61.4	59.0	64.1	61.0	61.4	1.8
Composite Sample 10	66.1	76.0	72.1	70.5	72.1	71.3	3.6
Reference sediment	68.1	69.7	64.1	79.2	70.5	70.3	5.5

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Table 3. Summary of the normality survival of bivalve larvae in relation to the reference sediments

Sample ID	Normality survival in relation to reference site (%)	Difference between sample and reference sediment (t-test)
Composite Sample 1	69.7	Significantly different, t critical=1.86, t stat=-7.482, p<0.0001 (one tail)
Composite Sample 2	69.6	Significantly different, t critical=1.86, t stat=-7.760, p<0.0001 (one tail)
Composite Sample 3	77.8	Significantly different, t critical=1.86, t stat=-3.952, p=0.0021 (one tail)
Composite Sample 4	72.5	Significantly different, t critical=1.86, t stat=-6.348, p=0.0001 (one tail)
Composite Sample 5	104.3	NA [1]
Composite Sample 6	111.1	NA [1]
Composite Sample 7	109.1	NA [1]
Composite Sample 8	114.8	NA [1]
Composite Sample 9	87.4	NA [1]
Composite Sample 10	101.5	NA [1]
NA[1] - As the average normality survival of the bivalve larvae for the test sediment was no less than 80% of that of the reference sediment, statistical analysis is not required.		

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6. Test validity

Table 4. Test validity criteria and water quality ranges in the bivalve test

Parameter	Minimum during the test period	Maximum during the test period	Control Limit
Overlying salinity	27 ppt	28 ppt	27-29ppt
Dissolved oxygen	6.3 mg/L	6.9 mg/L	>4.5mg/L [1]
Overlying pH	7.9	8.6	NA [2]
Temperature	19.1 °C	21.0 °C	19.0-21.0°C
Unionized ammonia in overlying water (initiation/termination)	<0.002 mg/L	0.03 mg/L	NA [3]
Larvae normality survival in the negative control	65.3 - 78.4% , averagely 72.5%		≥ 70% averagely
48-h EC_{50} obtained from the reference toxicant test	1.44 mg/L		1.45 ± 0.54 mg/L

1. 60% of saturation level at 28 ppt
2. pH is not adjusted or controlled
3. Overlying ammonia is not controlled. Results could be qualified as possible false positive when ammonia (unionized) is greater than 0.13 mg/L

As shown in Table 4, the water quality parameters during the test period ranged within control limits: temperature ranged from 19.1 to 21.0°C, the dissolved oxygen level ranged from 6.3 to 6.9 mg/L, pH ranged from 7.9 to 8.6, the salinity ranged from 27 to 28 ppt. As a result, the data are interpretable.

The tests were validated by acceptable normality survival of control organisms. The average normality survival rate in controls was greater than 70%.

The organisms also demonstrated comparable sensitivity to the reference toxicant (cadmium). The 48-hr EC_{50} for *Crassostrea gigas* obtained was 1.44 mgCd/L and found within the laboratory control limits (Mean±2STD, i.e., 1.45±0.54 mgCd/L). Therefore, the data are acceptable.

End of Report

Data entry checked by: _____
Y.M.Choy

TEST REPORT

Report No.	:	100502N
Project Name	:	Permanent Aviation Fuel Facility
Customer Name	:	Lam Geotechnics Limited
Customer Address	:	2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Contract No.	:	N/A
Works Order No.	:	N/A
Lab. Job No.	:	J514
Lab. Sample Ref. No.	:	17339/1-11
No. of Sample(s) & Description	:	17 no. of samples stated as sediment were received on chilled condition 11 no. of samples were tested including 10 composite samples 1-10
Sample Receive Date	:	16-26 Jun, 2006
Test Date	:	1-8 Aug, 2006

Test Parameter

Parameter	Test Method
Grain size	Geospec 3: Test 8.1
Moisture content	Geospec 3: Test 5.2
Total Organic Carbon	ALS Method Code EP-009

Note(s): 1.The TOC samples were subcontracted to ALS Technichem (HK) Pty Ltd.
2. NA = Not Applicable

Signatory: Yi Zhang **Date:** 31-Aug-2006

Test report

Report No.	:	100502N
Project Name	:	Permanent Aviation Fuel Facility
Customer Name	:	Lam Geotechnics Limited
Contract No.	:	N/A
Works Order No.	:	N/A
Lab. Sample Ref. No.	:	17339/1-11

Sample ID	Grain Size < 63 mm (%)	Moisture Content [1] (%)	TOC (% Wet Weight)	TOC (% Dry Weight) [2]
Composite sample 1	77	67	0.52	0.87
Composite sample 2	82	73	0.59	1.02
Composite sample 3	90	86	0.60	1.12
Composite sample 4	64	63	0.58	0.95
Composite sample 5	90	91	0.49	0.94
Composite sample 6	93	90	0.54	1.03
Composite sample 7	88	73	0.47	0.81
Composite sample 8	88	76	0.47	0.83
Composite sample 9	92	93	0.60	1.16
Composite sample 10	49	41	0.50	0.71
Reference sediment	48	56	0.46	0.72
Detection Limit	NA	NA	0.05	0.1

Note 1. Moisture content is calculated as: (Sample Wet Weight – Sample Dry Weight) / Sample Dry Weight x 100%
Note 2. TOC (% dry weight) is calculated as: TOC (% wet weight) x (1 + moisture content / 100)

End of Report

Data entry checked by: Y.M.Choy

TEST REPORT

Report No.	:	100500N
Project Name	:	Permanent Aviation Fuel Facility
Customer Name	:	Lam Geotechnics Limited
Customer Address	:	2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Contract No.	:	N/A
Works Order No.	:	N/A
Lab. Job No.	:	J514
Lab. Sample Ref. No.	:	17339/1-11
No. of Sample(s) & Description	:	17 no. of samples stated as sediment were received on chilled condition 11 no. of samples were tested including 10 composite samples 1-10 & reference sediment
Sample Receive Date	:	16-26 Jun, 2006
Test Date	:	27-Jul-2006

Test Parameter

Parameter	Test Method
Interstitial ammonia	APHA 4500-NH3 F. Phenate Method

Note(s): 1. N/A = Not applicable.

Signatory: Yi Zhang **Date**: 31-Aug-2006

Lam Laboratories Limited Room 1412, Honour Industrial Centre, 6 Sun Yip Street, Chaiwan, Hong Kong.
Tel: (852) 2897 3282 Fax: (852) 2897 5509 Email: info@lamlab.com

Test report

Certificate no.: 100500N

Sample ID	Interstitial ammonia ($mgNH_3/L$)
Composite Sample1	9.5
Composite Sample2	11.4
Composite Sample3	28.0
Composite Sample4	1.7
Composite Sample5	9.3
Composite Sample6	6.4
Composite Sample7	14.6
Composite Sample8	10.4
Composite Sample9	12.3
Composite Sample10	23.4
Reference Sediment	3.3
Detection limit	0.03

Sample duplicate

Sample ID	Relative deviation (%)
Reference Sediment	4.6
Control limits	±20% from the mean

Sample Spike

Sample ID	Spike recovery (%)
Reference Sediment	115.9
Control limits	80-120% from the nominal value

End of Report

Data entry checked by: Y.M.Choy

TEST REPORT

Report No.	:	100501N
Project Name	:	Permanent Aviation Fuel Facility
Customer Name	:	Lam Geotechnics Limited
Customer Address	:	2304-6 World Trade Centre, 280 Gloucester Road, Causeway Bay, Hong Kong
Contract No.	:	N/A
Works Order No.	:	N/A
Lab. Job No.	:	J514
Lab. Sample Ref. No.	:	17339/1-11
No. of Sample(s) & Description	:	17 no. of samples stated as sediment were received on chilled condition 11 no. of samples were tested including 10 composite samples 1-10 & reference sediment
Sample Receive Date	:	16-26 Jun, 2006
Test Date	:	26-Jul-2006

Test Parameter

Parameter	Test Method
Interstitial salinity	APHA 2502 B

Note(s): 1. NA = Not applicable.

Signatory: Yi Zhang **Date:** 31-Aug-2006

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Test report

Report no.: 100501N

Sample ID	Interstitial salinity (ppt)
Composite Smaple 1	29
Composite Smaple 2	29
Composite Smaple 3	29
Composite Smaple 4	27
Composite Smaple 5	28
Composite Smaple 6	29
Composite Smaple 7	29
Composite Smaple 8	29
Composite Smaple 9	29
Composite Smaple 10	30
Reference sediment	34
Detection limit	NA

Sample duplicate

Sample ID	Relative deviation (%)
Reference sediment	-2.6
Control limits	±20% from the mean

Standard check

Sample ID	Recovery (%)
Reference standard	99.6
Control limits	80-120% from the nominal value

End of Report

Data entry checked by: Y.M.Choy