



**Elutriate**

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**Metals**

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REPORT OF ANALYSIS

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG	<b>Job No.</b> : LAML01/060914 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 14-SEP-2006 <b>Sampled By</b> : CLIENT
<b>Attention</b> : WONG YAU TIM	
<b>Project Name</b> :	
<b>Your Client Services Manager</b> : BRIAN WOODWARD	<b>Phone</b> : (02) 94490151

Lab Reg No.	Sample Ref	Sample Description
NQ06/04836	VC14A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04837	VC14A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04838	VC5A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04839	VC5A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999

Lab Reg No.		NQ06/04836	NQ06/04837	NQ06/04838	NQ06/04839	
Sample Reference	Units	VC14A	VC14A	VC5A	VC5A	Method
<b>Trace Elements</b>						
Arsenic-Total	ug/L	3.9	57	9.6	69	NT247_251
Copper-Total	ug/L	<1	<1	2.7	2.9	NT2_47
Mercury-Total	ug/L	<0.1	<0.1	<0.1	<0.1	NT2_47_244

Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

28-SEP-2006

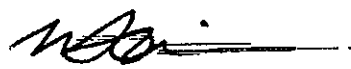
## REPORT OF ANALYSIS

Page: 2 of 3  
Report No. RN574343

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : WONG YAU TIM <b>Project Name</b> : <b>Your Client Services Manager</b> : BRIAN WOODWARD	<b>Job No.</b> : LAML01/060914 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 14-SEP-2006 <b>Sampled By</b> : CLIENT  <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/04840	VC15A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04841	VC15A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04842	VC13A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04843	VC13A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999

Lab Reg No.		NQ06/04840	NQ06/04841	NQ06/04842	NQ06/04843	
Sample Reference	Units	VC15A	VC15A	VC13A	VC13A	Method
<b>Trace Elements</b>						
Arsenic-Total	ug/L	6.3	76	1.6	9.2	NT247_251
Copper-Total	ug/L	<1	<1	4.9	3.6	NT2_47
Mercury-Total	ug/L	<0.1	<0.1	<0.1	<0.1	NT2_47_244



Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

28-SEP-2006

Total = Acid extractable trace elements.



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Results relate only to the sample(s) tested.

## REPORT OF ANALYSIS

Page: 3 of 3  
Report No. RN574343

This Report supersedes reports: *RN573672*



**Australian Government**  
**National Measurement Institute**

**QUALITY ASSURANCE REPORT**

**Client:** LAM LABORATORIES

**NMI QA Report No:** LAML01/060914T1

**Sample Matrix:** Water

Analyte	Method	LOR	Blank	Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
				ug/L	ug/L	%	%	%
<b>Inorganics Section</b>				<b>NQ06/04843</b>			<b>NQ06/04843</b>	
Arsenic	NT2.47/2.51	1	<1	9.3	9.1	2.2	98	79
Copper	NT2.47	1	<1	3.7	3.6	2.7	90	99
Mercury	NT2.47/2.44	0.1	<0.1	<0.1	<0.1	ND	90	86

Filename = K:\CPMS\Trace\QAR2006\Water\

**Legend:**

Acceptable recovery is 75-120%.

Acceptable RPDs on duplicates is 44% at concentrations >5 times LOR. Greater RPD may be expected at <5 times LOR.

LOR = Limit Of Reporting

ND = Not Determined

RPD = Relative Percent Difference

NA = Not Applicable

LCS = Laboratory Control Sample.

#: Spike level is less than 50% of the sample's concentration, hence the recovery data is not reliable.

**Comments:**

Results greater than ten times LOR have been rounded to two significant figures.

This report shall not be reproduced except in full.

**Signed:**

**Dr Honway Louie**  
**Inorganics Manager, NMI-Pymble**  
 27/09/2006

**Date:**



REPORT OF ANALYSIS

<b>Client</b>	: LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG	<b>Job No.</b>	: LAML01/060914
<b>Attention</b>	: WONG YAU TIM	<b>Quote No.</b>	: QT-00441
<b>Project Name</b>	:	<b>Order No.</b>	:
<b>Your Client Services Manager</b>	: BRIAN WOODWARD	<b>Date Sampled</b>	:
		<b>Date Received</b>	: 14-SEP-2006
		<b>Sampled By</b>	: CLIENT
		<b>Phone</b>	: (02) 94490151

Lab Reg No.	Sample Ref	Sample Description
NQ06/04836/1	VC14A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04837/1	VC14A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04838/1	VC5A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999

Lab Reg No.			NQ06/04836/1	NQ06/04837/1	NQ06/04838/1	
Sample Reference	Units	LOR	VC14A	VC14A	VC5A	Method
<b>Trace Elements</b>						
Lead-Total	ug/L	1	<1	1.7	<1	NT2_47
Silver-Total	ug/L	1	<1	<1	<1	NT2_47

Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

12-OCT-2006

## REPORT OF ANALYSIS

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Report No. RN576797

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : WONG YAU TIM <b>Project Name</b> : <b>Your Client Services Manager</b> : BRIAN WOODWARD	<b>Job No.</b> : LAML01/060914 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 14-SEP-2006 <b>Sampled By</b> : CLIENT <b>Phone</b> : (02) 94490151
--	--

Lab Reg No.	Sample Ref	Sample Description
NQ06/04839/1	VC5A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04840/1	VC15A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04841/1	VC15A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999

Lab Reg No.	Units	LOR	NQ06/04839/1	NQ06/04840/1	NQ06/04841/1	Method
Sample Reference			VC5A	VC15A	VC15A	
<b>Trace Elements</b>						
Lead-Total	ug/L	1	2.8	1.1	1.3	NT2_47
Silver-Total	ug/L	1	<1	2.7	1.1	NT2_47

NQ06/04840/1

Silver result has been confirmed by repeat analysis.

NQ06/04841/1

Silver result has been confirmed by repeat analysis.



Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

12-OCT-2006



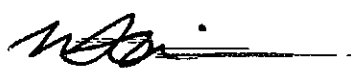
## REPORT OF ANALYSIS

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Report No. RN576797

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : WONG YAU TIM <b>Project Name</b> : <b>Your Client Services Manager</b> : BRIAN WOODWARD	<b>Job No.</b> : LAMLO1/060914 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 14-SEP-2006 <b>Sampled By</b> : CLIENT <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/04842/1	VC13A	MARINE WATER 0.0-0.9M GE/2005/047 JOB J469 SO19-17986,17999
NQ06/04843/1	VC13A	MARINE WATER 0.9-1.9M GE/2005/047 JOB J469 SO19-17986,17999

Lab Reg No.	Units	LOR	NQ06/04842/1	NQ06/04843/1	Method
Sample Reference			VC13A	VC13A	
<b>Trace Elements</b>					
Lead-Total	ug/L	1	1.8	2.6	NT2_47
Silver-Total	ug/L	1	<1	<1	NT2_47



Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

12-OCT-2006

Total = Acid extractable trace elements.



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Results relate only to the sample(s) tested.

This Report supersedes reports: RN576545



**Australian Government**  
**National Measurement Institute**

**QUALITY ASSURANCE REPORT**

**Client:** LAM LABORATORIES

**NMI QA Report No:** LAML01/060914T1

**Sample Matrix:** Water

Analyte	Method	LOR	Blank	Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
		ug/L	ug/L	ug/L	ug/L	%	%	%
<b>Inorganics Section</b>				<b>NQ06/04843</b>			<b>NQ06/04843</b>	
Arsenic	NT2.47/2.51	1	<1	9.3	9.1	2.2	98	79
Copper	NT2.47	1	<1	3.7	3.6	2.7	90	99
Mercury	NT2.47/2.44	0.1	<0.1	<0.1	<0.1	ND	90	86
Silver	NT2.47	1	<1	<1	<1	ND	96	98
Lead	NT2.47	1	<1	2.7	2.4	12	96	97

Filename = \\S212PPFILE\Home\jh2005\

**Legend:**

Acceptable recovery is 75-120%.

Acceptable RPDs on duplicates is 44% at concentrations > 5 times LOR. Greater RPD may be expected at < 5 times LOR.

LOR = Limit Of Reporting

ND = Not Determined

RPD = Relative Percent Difference

NA = Not Applicable

LCS = Laboratory Control Sample.

#: Spike level is less than 50% of the sample's concentration, hence the recovery data is not reliable.

**Comments:**

Results greater than ten times LOR have been rounded to two significant figures.

This report shall not be reproduced except in full.

**Signed:**

**Dr Honway Louie**  
Inorganics Manager, NMI-Pymble  
27/09/2006

**Date:**



REPORT OF ANALYSIS

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG	<b>Job No.</b> : LAML01/060925 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 25-SEP-2006 <b>Sampled By</b> : CLIENT
<b>Attention</b> : WONG YAU TIM	<b>Phone</b> : (02) 94490151
<b>Project Name</b> :	
<b>Your Client Services Manager</b> : Brian Woodward	

Lab Reg No.	Sample Ref	Sample Description
NQ06/05281	VC2A	MARINE WATER GE/2005/047 JOB J469 SO19 0.0-0.9M
NQ06/05282	VC2A	MARINE WATER GE/2005/047 JOB J469 SO19 0.9-1.9M
NQ06/05283	VC3A	MARINE WATER GE/2005/047 JOB J469 SO19 0.0-0.9M

Lab Reg No.	Units	LOR	NQ06/05281	NQ06/05282	NQ06/05283	Method
Sample Reference			VC2A	VC2A	VC3A	
<b>Trace Elements</b>						
Arsenic-Total	ug/L	1	15	48	33	NT247_251
Copper-Total	ug/L	1	<1	<1	1.1	NT2_47
Lead-Total	ug/L	1	1.1	1.2	1	NT2_47
Mercury-Total	ug/L	0.1	<0.1	<0.1	<0.1	NT2_47_244
Silver-Total	ug/L	1	<1	<1	<1	NT2_47

Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

12-OCT-2006.

## REPORT OF ANALYSIS

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Report No. RN576852

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : WONG YAU TIM <b>Project Name</b> : <b>Your Client Services Manager</b> : Brian Woodward	<b>Job No.</b> : LAML01/060925 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 25-SEP-2006 <b>Sampled By</b> : CLIENT  <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/05284	VC3A	MARINE WATER GE/2005/047 JOB J469 SO19 0.9-1.9M
NQ06/05285	VC4A	MARINE WATER GE/2005/047 JOB J469 SO19 0.0-0.9M
NQ06/05286	VC4A	MARINE WATER GE/2005/047 JOB J469 SO19 0.9-1.9M

Lab Reg No.	Units	LOR	NQ06/05284	NQ06/05285	NQ06/05286	Method
Sample Reference			VC3A	VC4A	VC4A	
<b>Trace Elements</b>						
Arsenic-Total	ug/L	1	16	1.1	100	NT247_251
Copper-Total	ug/L	1	2.4	2.9	2	NT2_47
Lead-Total	ug/L	1	3.4	<1	1	NT2_47
Mercury-Total	ug/L	0.1	<0.1	<0.1	<0.1	NT2_47_244
Silver-Total	ug/L	1	<1	<1	<1	NT2_47



Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

12-OCT-2006

## REPORT OF ANALYSIS

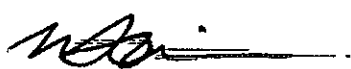
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Report No. RN576852

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : WONG YAU TIM <b>Project Name</b> : <b>Your Client Services Manager</b> : Brian Woodward	<b>Job No.</b> : LAML01/060925 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 25-SEP-2006 <b>Sampled By</b> : CLIENT <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/05287	VC6A	MARINE WATER GE/2005/047 JOB J469 SO19 0.0-0.9M
NQ06/05288	VC6A	MARINE WATER GE/2005/047 JOB J469 SO19 0.9-1.9M
NQ06/05289	VC7A	MARINE WATER GE/2005/047 JOB J469 SO19 0.0-0.9M

Lab Reg No.	Units	LOR	NQ06/05287	NQ06/05288	NQ06/05289	Method
Sample Reference			VC6A	VC6A	VC7A	
<b>Trace Elements</b>						
Arsenic-Total	ug/L	1	<1	4.5	15	NT247_251
Copper-Total	ug/L	1	1	2.2	1.6	NT2_47
Lead-Total	ug/L	1	<1	2.8	1.9	NT2_47
Mercury-Total	ug/L	0.1	<0.1	<0.1	<0.1	NT2_47_244
Silver-Total	ug/L	1	<1	<1	<1	NT2_47



Dr. Honway Louie, Section Manager  
 Inorganics - NSW (Accreditation No. 198)

12-OCT-2006

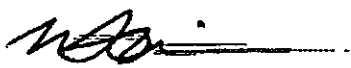
## REPORT OF ANALYSIS

Page: 4 of 5  
Report No. RN576852

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : WONG YAU TIM <b>Project Name</b> : <b>Your Client Services Manager</b> : Brian Woodward	<b>Job No.</b> : LAML01/060925 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 25-SEP-2006 <b>Sampled By</b> : CLIENT  <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/05290	VC7A	MARINE WATER GE/2005/047 JOB J469 SO19 0.9-1.9M
NQ06/05291	VC11A	MARINE WATER GE/2005/047 JOB J469 SO19 0.0-0.9M
NQ06/05292	VC11A	MARINE WATER GE/2005/047 JOB J469 SO19 0.9-1.9M

Lab Reg No.			NQ06/05290	NQ06/05291	NQ06/05292	
Sample Reference	Units	LOR	VC7A	VC11A	VC11A	Method
<b>Trace Elements</b>						
Arsenic-Total	ug/L	1	37	<1	16	NT247_251
Copper-Total	ug/L	1	<1	1.1	1.8	NT2_47
Lead-Total	ug/L	1	<1	<1	1.9	NT2_47
Mercury-Total	ug/L	0.1	<0.1	<0.1	<0.1	NT2_47_244
Silver-Total	ug/L	1	<1	<1	<1	NT2_47



Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

12-OCT-2006

Total = Acid extractable trace elements.



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## REPORT OF ANALYSIS

Page: 5 of 5  
Report No. RN576852

This Report supersedes reports: *RN576283*



**Australian Government**  
**National Measurement Institute**

**QUALITY ASSURANCE REPORT**

**Client:** LAM GEOTECHNICS LTD

**NMI QA Report No:** LAML01/060925T1

**Sample Matrix:** Water

Analyte	Method	LOR	Blank	Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
		ug/L	ug/L	ug/L	ug/L	%	%	%
<b>Inorganics Section</b>				<b>NQ06/05292</b>			<b>NQ06/05292</b>	
Arsenic	NT2.47/2.51	1	<1	16	16	0	94	99
Copper	NT2.47	1	<1	1.8	1.8	0	100	102
Lead	NT2.47	1	<1	1.7	2.2	26	100	104
Mercury	NT2.47/2.44	0.1	<0.1	<0.1	<0.1	ND	108	98
Silver	NT2.47	1	<1	<1	<1	ND	101	104

Filename = K:\ICPMS\Trace\QAR2006\Water\

**Legend:**

Acceptable recovery is 75-120%.

Acceptable RPDs on duplicates is 44% at concentrations > 5 times LOR. Greater RPD may be expected at < 5 times LOR.

LOR = Limit Of Reporting

ND = Not Determined

RPD = Relative Percent Difference

NA = Not Applicable

LCS = Laboratory Control Sample.

#: Spike level is less than 50% of the sample's concentration, hence the recovery data is not reliable.

**Comments:**

Results greater than ten times LOR have been rounded to two significant figures.

This report shall not be reproduced except in full.

**Signed:**

**Dr Honway Louie**  
**Inorganics Manager, NMI-Pymble**  
**10/10/2006**

**Date:**





REPORT OF ANALYSIS

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG	<b>Job No.</b> : LAML01/061003 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 3-OCT-2006 <b>Sampled By</b> : CLIENT
<b>Attention</b> : TIM WONG	<b>Phone</b> : (02) 94490151
<b>Project Name</b> :	
<b>Your Client Services Manager</b> : BRIAN WOODWARD	

Lab Reg No.	Sample Ref	Sample Description
NQ06/06145	VC1A	MARINE WATER GE/2005/047 JOB J469-SO19 0.0-0.9M
NQ06/06146	VC1A	MARINE WATER GE/2005/047 JOB J469-SO19 0.9-1.9M
NQ06/06147	VC8A	MARINE WATER GE/2005/047 JOB J469-SO19 0.0-0.9M

Lab Reg No.			NQ06/06145	NQ06/06146	NQ06/06147	
Sample Reference	Units	LOR	VC1A	VC1A	VC8A	Method
<b>Trace Elements</b>						
Arsenic-Total	ug/L	1	71	69	4.1	NT247_251
Copper-Total	ug/L	1	<1	1.4	1.2	NT2_47
Lead-Total	ug/L	1	8.1	<1	<1	NT2_47
Mercury-Total	ug/L	0.1	<0.1	<0.1	<0.1	NT2_47_244
Silver-Total	ug/L	1	<1	<1	<1	NT2_47

Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

17-OCT-2006

## REPORT OF ANALYSIS

Page: 2 of 4  
Report No. RN577441

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : TIM WONG <b>Project Name</b> : <b>Your Client Services Manager</b> : BRIAN WOODWARD	<b>Job No.</b> : LAML01/061003 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 3-OCT-2006 <b>Sampled By</b> : CLIENT <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/06148	VC8A	MARINE WATER GE/2005/047 JOB J469-SO19 0.9-1.9M
NQ06/06149	VC9A	MARINE WATER GE/2005/047 JOB J469-SO19 0.0-0.9M
NQ06/06150	VC9A	MARINE WATER GE/2005/047 JOB J469-SO19 0.9-1.9M

Lab Reg No.	Units	LOR	NQ06/06148	NQ06/06149	NQ06/06150	Method
Sample Reference			VC8A	VC9A	VC9A	
<b>Trace Elements</b>						
Arsenic-Total	ug/L	1	59	2.4	53	NT247_251
Copper-Total	ug/L	1	<1	1.7	<1	NT2_47
Lead-Total	ug/L	1	1.3	<1	<1	NT2_47
Mercury-Total	ug/L	0.1	<0.1	<0.1	<0.1	NT2_47_244
Silver-Total	ug/L	1	<1	<1	<1	NT2_47



Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

17-OCT-2006

## REPORT OF ANALYSIS

Page: 3 of 4

Report No. RN577441

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : TIM WONG <b>Project Name</b> : <b>Your Client Services Manager</b> : BRIAN WOODWARD	<b>Job No.</b> : LAML01/061003 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 3-OCT-2006 <b>Sampled By</b> : CLIENT  <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/06151	VC10A	MARINE WATER GE/2005/047 JOB J469-SO19 0.0-0.9M
NQ06/06152	VC10A	MARINE WATER GE/2005/047 JOB J469-SO19 0.9-1.9M
NQ06/06153	VC12A	MARINE WATER GE/2005/047 JOB J469-SO19 0.0-0.9M

Lab Reg No.			NQ06/06151	NQ06/06152	NQ06/06153	
Sample Reference	Units	LOR	VC10A	VC10A	VC12A	Method
<b>Trace Elements</b>						
Arsenic-Total	ug/L	1	1.7	93	<1	NT247_251
Copper-Total	ug/L	1	3.1	2	<1	NT2_47
Lead-Total	ug/L	1	<1	1.4	<1	NT2_47
Mercury-Total	ug/L	0.1	<0.1	<0.1	<0.1	NT2_47_244
Silver-Total	ug/L	1	<1	<1	<1	NT2_47



Dr. Honway Louie, Section Manager  
 Inorganics - NSW (Accreditation No. 198)

17-OCT-2006

## REPORT OF ANALYSIS

Page: 4 of 4  
Report No. RN577441

<b>Client</b> : LAM LABORATORIES LTD 1412 - 1416 HONOUR IND CENTRE 6 SUN YIP STREET CHAI WAN HONG KONG <b>Attention</b> : TIM WONG <b>Project Name</b> : <b>Your Client Services Manager</b> : BRIAN WOODWARD	<b>Job No.</b> : LAML01/061003 <b>Quote No.</b> : QT-00441 <b>Order No.</b> : <b>Date Sampled</b> : <b>Date Received</b> : 3-OCT-2006 <b>Sampled By</b> : CLIENT  <b>Phone</b> : (02) 94490151
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Lab Reg No.	Sample Ref	Sample Description
NQ06/06154	VC12A	MARINE WATER GE/2005/047 JOB J469-SO19 0.9-1.9M

Lab Reg No.	Units	LOR	NQ06/06154	VC12A	Method
<b>Trace Elements</b>					
Arsenic-Total	ug/L	1	14		NT247_251
Copper-Total	ug/L	1	<1		NT2_47
Lead-Total	ug/L	1	<1		NT2_47
Mercury-Total	ug/L	0.1	<0.1		NT2_47_244
Silver-Total	ug/L	1	<1		NT2_47



Dr. Honway Louie, Section Manager  
Inorganics - NSW (Accreditation No. 198)

17-OCT-2006

Total = Acid extractable trace elements.



This report is issued in accordance with NATA's accreditation requirements.  
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Results relate only to the sample(s) tested.

This Report supersedes reports: RN576933



**Australian Government**  
**National Measurement Institute**

**QUALITY ASSURANCE REPORT**

**Client:** LAM LABORATORIES

**NMI QA Report No:** LAML01/061003T1

**Sample Matrix:** Water

Analyte	Method	LOR	Blank	Duplicates			Recoveries	
				Sample	Duplicate	RPD	LCS	Matrix Spike
		ug/L	ug/L	ug/L	ug/L	%	%	%
<b>Inorganics Section</b>				<b>NQ06/06154</b>			<b>NQ06/06154</b>	
Arsenic	NT2.47/2.51	1	<1	14	14	0.0	104	107
Copper	NT2.47	1	<1	<1	<1	ND	106	100
Mercury	NT2.47/2.44	0.1	<0.1	<0.1	<0.1	ND	120	108
Silver	NT2.47	1	<1	<1	<1	ND	103	101
Lead	NT2.47	1	<1	<1	<1	ND	109	99

Filename = \\S212PPFILE\Home\jh2005\

**Legend:**

Acceptable recovery is 75-120%.

Acceptable RPDs on duplicates is 44% at concentrations >5 times LOR. Greater RPD may be expected at <5 times LOR.

LOR = Limit Of Reporting

ND = Not Determined

RPD = Relative Percent Difference

NA = Not Applicable

LCS = Laboratory Control Sample.

#: Spike level is less than 50% of the sample's concentration, hence the recovery data is not reliable.

**Comments:**

Results greater than ten times LOR have been rounded to two significant figures.

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**Signed:**

  
 Dr. Honway Louie  
 Inorganics Manager, NMI-Pymble  
 13/10/2006

**Date:**



Laboratories

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PAH

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**TEST REPORT**

**Report No.** : 100971N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  
**Address** : 8/F Civil Engineering and Development Building, 101 Princess Margaret Road,  
 Kowloon, Hong Kong

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**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122  
**Sample Description** : 30 elutriate samples said to be saline water  
**Sample Receipt Date** : 09 September 2006 - 27 September 2006  
**Test Period** : 10 September 2006 - 09 October 2006

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

CODE	Test Parameter	Reporting Limit	Test Procedure
		ug/L	
NAP	Naphthalene	0.2	W/O/PAH
ANY	Acenaphthylene	0.2	W/O/PAH
ANA	Acenaphthene	0.2	W/O/PAH
FLU	Fluorene	0.2	W/O/PAH
PHE	Phenanthrene	0.2	W/O/PAH
ANT	Anthracene	0.2	W/O/PAH

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

CODE	Test Parameter	Reporting Limit	Test Procedure
		ug/L	
CHR	Chrysene	0.2	W/O/PAH
BaA	Benzo(a)anthracene	0.2	W/O/PAH
BbF	Benzo(b)fluoranthene	0.2	W/O/PAH
BkF	Benzo(k)fluoranthene	0.2	W/O/PAH
BaP	Benzo(a)pyrene	0.2	W/O/PAH
DBA	Dibenz(ah)anthracene	0.2	W/O/PAH
FLT	Fluoranthene	0.2	W/O/PAH
IPY	Indeno(1,2,3-cd)pyrene	0.2	W/O/PAH
PYR	Pyrene	0.2	W/O/PAH
BPE	Benzo(ghi)perylene	0.2	W/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. < = less than
  4. N/A = Not applicable
  5. Test results satisfy all in-house QA/QC protocols as attached.
  6. Test description ( for in-house methods) as follows:  
W/O/PAH: Solvent extraction and GC-MS Quantification.
  7. The elutriate samples were prepared according to contract agreed procedure.

Authorized Signatory :



Wong Yau Tim  
(Operations Manager)

Issue Date: 27 Dec. 2006

**TEST REPORT**

**Report No.** : 100971N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  


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**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122  
**Test Results**

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

Customer Ref. Drillhole No.	Sample				NAP ug/L	ANY ug/L	ANA ug/L	FLU ug/L	PHE ug/L	ANT ug/L	
	Depth, m			Type							Specimen Depth m
	No.	From	To								
Elutriate VC14a(0.0-0.9m)(VC14a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC14a(0.9-1.9m)(VC14a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC5a(0.0-0.9m)(VC5a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC5a(0.9-1.9m)(VC5a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC15a(0.0-0.9m)(VC15a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC15a(0.9-1.9m)(VC15a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC13a(0.0-0.9m)(VC13a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC13a(0.9-1.9m)(VC13a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC4a(0.0-0.9m)(VC4a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC4a(0.9-1.9m)(VC4a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC6a(0.0-0.9m)(VC6a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC6a(0.9-1.9m)(VC6a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC3a(0.0-0.9m)(VC3a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC3a(0.9-1.9m)(VC3a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC7a(0.0-0.9m)(VC7a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC7a(0.9-1.9m)(VC7a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC2a(0.0-0.9m)(VC2a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC2a(0.9-1.9m)(VC2a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC11a(0.0-0.9m)(VC11a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC11a(0.9-1.9m)(VC11a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2



**TEST REPORT**

Report No. : 100971N  
 Project Name : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
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 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
 Customer : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department

Lab Job No. : J469  
 Lab Sample No. : 17986,17999,18015,18026,18044,18071,18079,18105,18122

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

Customer Ref. Drillhole No.	Sample				CHR ug/L	BaA ug/L	BbF ug/L	BkF ug/L	BaP ug/L	DBA ug/L	FLT ug/L	IPY ug/L	PYR ug/L	BPE ug/L
	Depth, m			Type Specimen Depth m										
	No.	From	To											
Elutriate VC14a(0.0-0.9m)(VC14a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC14a(0.9-1.9m)(VC14a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC5a(0.0-0.9m)(VC5a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC5a(0.9-1.9m)(VC5a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC15a(0.0-0.9m)(VC15a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC15a(0.9-1.9m)(VC15a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC13a(0.0-0.9m)(VC13a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC13a(0.9-1.9m)(VC13a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC4a(0.0-0.9m)(VC4a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC4a(0.9-1.9m)(VC4a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC6a(0.0-0.9m)(VC6a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC6a(0.9-1.9m)(VC6a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC3a(0.0-0.9m)(VC3a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC3a(0.9-1.9m)(VC3a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC7a(0.0-0.9m)(VC7a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC7a(0.9-1.9m)(VC7a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC2a(0.0-0.9m)(VC2a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC2a(0.9-1.9m)(VC2a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC11a(0.0-0.9m)(VC11a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC11a(0.9-1.9m)(VC11a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

**TEST REPORT**

Report No. : 100971N  
 Project Name : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
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 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
 Customer : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department

Lab Job No. : J469  
 Lab Sample No. : 17986,17999,18015,18026,18044,18071,18079,18105,18122

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

Customer Ref. Drillhole No.	Sample				NAP ug/L	ANY ug/L	ANA ug/L	FLU ug/L	PHE ug/L	ANT ug/L
	Depth, m			Type Specimen Depth m						
	No.	From	To							
Elutriate VC12a(0.0-0.9m)(VC12a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC12a(0.9-1.9m)(VC12a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC8a(0.0-0.9m)(VC8a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC8a(0.9-1.9m)(VC8a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC10a(0.0-0.9m)(VC10a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC10a(0.9-1.9m)(VC10a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC1a(0.0-0.9m)(VC1a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC1a(0.9-1.9m)(VC1a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC9a(0.0-0.9m)(VC9a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC9a(0.9-1.9m)(VC9a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2

**TEST REPORT**

**Report No.** : 100971N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
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**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  


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**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122  


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**Test Results**

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

Customer Ref. Drillhole No.	Sample				CHR ug/L	BaA ug/L	BbF ug/L	BkF ug/L	BaP ug/L	DBA ug/L	FLT ug/L	IPY ug/L	PYP ug/L	BPE ug/L
	Depth, m			Type Specimen Depth m										
	No.	From	To											
Elutriate VC12a(0.0-0.9m)(VC12a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC12a(0.9-1.9m)(VC12a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC8a(0.0-0.9m)(VC8a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC8a(0.9-1.9m)(VC8a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC10a(0.0-0.9m)(VC10a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC10a(0.9-1.9m)(VC10a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC1a(0.0-0.9m)(VC1a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC1a(0.9-1.9m)(VC1a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC9a(0.0-0.9m)(VC9a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Elutriate VC9a(0.9-1.9m)(VC9a)	N/A	N/A	N/A		N/A	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

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

**QUALITY CONTROL REPORT**

Report No. : 100971N  
 Project Name : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
 Customer : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  
 Lab Job No. : J469  
 Lab Sample No. : 17986,17999,18015,18026,18044,18071,18079,18105,18122  
 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 Depth m							
	No.	From	To									
18011/1	N/A	N/A	N/A		N/A	1	na*	na*	na*	na*	na*	na*
Elutriate VC3a(0.0-0.9m) (VC3a)	N/A	N/A	N/A		N/A	2	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 Depth m							
	No.	From	To									
18011/2	N/A	N/A	N/A		N/A	1	94	94	87	83	98	83
Elutriate VC3a(0.9-1.9m) (VC3a)	N/A	N/A	N/A		N/A	2	87	95	90	86	97	90
Control Limits						70 - 130 %						

## Notes :

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

Authorized Signatory :

Issue Date: 27 Dec. 2006

  
 Wong Yau Tim  
 (Operations Manager)

**QUALITY CONTROL REPORT**

**Report No.** : 100971N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  
**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**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 Depth m											
	No.	From	To												
18011/1	N/A	N/A	N/A		N/A	1	na*	na*	na*	na*	na*	na*	na*	na*	na*
Elutriate VC3a(0.0-0.9m) (VC3a)	N/A	N/A	N/A		N/A	2	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 Depth m												
	No.	From	To													
18011/2	N/A	N/A	N/A		N/A	1	87	95	82	88	93	89	83	89	100	107
Elutriate VC3a(0.9-1.9m) (VC3a)	N/A	N/A	N/A		N/A	2	85	99	99	96	106	109	84	103	99	91
Control Limits						70 - 130 %										

**Notes :**

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

**QUALITY CONTROL REPORT**

Report No. : 100971N  
 Project Name : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
 Customer : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department

Lab Job No. : J469  
 Lab Sample No. : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results****1. Low Molecular Weight Polyaromatic Hydrocarbons, LMW PAHs****1.3 QC Sample (Spike Level = 5 ug)**

Customer Ref.	Sample					Batch	NAP	ANY	ANA	FLU	PHE	ANT
Drillhole No.	Depth, m			Type	Specimen Depth m		%	%	%	%	%	%
	No.	From	To				%	%	%	%	%	%
MB Spike	N/A	N/A	N/A		N/A	1	91	95	86	83	101	90
MB Spike	N/A	N/A	N/A		N/A	2	95	91	86	81	95	90
Control Limits							70 - 130 %					

**1.4 Method Blank**

Customer Ref.	Sample					Batch	NAP	ANY	ANA	FLU	PHE	ANT
Drillhole No.	Depth, m			Type	Specimen Depth m		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	No.	From	To				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
N/A	N/A	N/A	N/A		N/A	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
N/A	N/A	N/A	N/A		N/A	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Control Limits							Less than reporting limit					

**QUALITY CONTROL REPORT**

**Report No.** : 100971N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
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**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  


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**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results****2. High Molecular Weight Polyaromatic Hydrocarbons, HMW PAHs****2.3 QC Sample (Spike Level = 5 ug)**

Customer Ref.	Sample				Batch	CHR	BaA	BbF	BkF	BaP	DBA	FLT	IPY	PYR	BPE	
Drillhole No.	Depth, m			Type		Specimen Depth m	%	%	%	%	%	%	%	%	%	%
	No.	From	To				%	%	%	%	%	%	%	%	%	
MB Spike	N/A	N/A	N/A		N/A	1	97	103	101	106	108	84	97	85	102	105
MB Spike	N/A	N/A	N/A		N/A	2	88	101	103	99	111	93	84	95	102	97
Control Limits						70 - 130 %										

**2.4 Method Blank**

Customer Ref.	Sample				Batch	CHR	BaA	BbF	BkF	BaP	DBA	FLT	IPY	PYR	BPE	
Drillhole No.	Depth, m			Type		Specimen Depth m	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	No.	From	To				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
N/A	N/A	N/A	N/A		N/A	1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
N/A	N/A	N/A	N/A		N/A	2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Control Limits						Less than reporting limit										



Laboratories

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PCBs

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**TEST REPORT**

**Report No.** : 100972N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  
**Address** : 8/F Civil Engineering and Development Building, 101 Princess Margaret Road,  
 Kowloon, Hong Kong  


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**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122  
**Sample Description** : 30 elutriate samples said to be saline water  
**Sample Receipt Date** : 09 September 2006 - 27 September 2006  
**Test Period** : 10 September 2006 - 09 October 2006


**Test Information**

CODE	Test Parameter	Reporting Limit	Test Procedure
		ug/L	
8	2,4' dichlorobiphenyl	0.01	W/O/PCB
18	2,2',5 trichlorobiphenyl	0.01	W/O/PCB
28	2,4,4' trichlorobiphenyl	0.01	W/O/PCB
44	2,2',3,5' tetrachlorobiphenyl	0.01	W/O/PCB
52	2,2',5,5' tetrachlorobiphenyl	0.01	W/O/PCB
66	2,3',4,4' tetrachlorobiphenyl	0.01	W/O/PCB
77	3,3',4,4' tetrachlorobiphenyl	0.01	W/O/PCB
101	2,2',4,5,5' pentachlorobiphenyl	0.01	W/O/PCB
105	2,3,3',4,4' pentachlorobiphenyl	0.01	W/O/PCB
118	2,3',4,4',5 pentachlorobiphenyl	0.01	W/O/PCB
126	3,3',4,4',5 pentachlorobiphenyl	0.01	W/O/PCB
128	2,2',3,3',4,4' hexachlorobiphenyl	0.01	W/O/PCB
138	2,2',3,4,4',5' hexachlorobiphenyl	0.01	W/O/PCB
153	2,2',4,4',5,5' hexachlorobiphenyl	0.01	W/O/PCB
169	3,3',4,4',5,5' hexachlorobiphenyl	0.01	W/O/PCB
170	2,2',3,3',4,4',5 heptachlorobiphenyl	0.01	W/O/PCB
180	2,2',3,4,4',5,5' heptachlorobiphenyl	0.01	W/O/PCB
187	2,2',3,4',5,5',6 heptachlorobiphenyl	0.01	W/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. < = less than
  4. N/A = Not applicable
  5. Test results satisfy all in-house QA/QC protocols as attached.
  6. Test description ( for in-house methods) as follows:  
W/O/PCB: Solvent extraction and GC-MS Quantification.
  7. The elutriate samples were prepared according to contract agreed procedure.

Authorized Signatory :

Issue Date: 27 Dec. 2006

  
 Wong Yau Tim  
 (Operations Manager)

**TEST REPORT**

**Report No.** : 100972N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
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 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  


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**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results**

Customer Ref. Drillhole No.	Sample				Specimen Depth m	8	18	28	44	52	66	77	101	105
	Depth, m			Type		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	No.	From	To			ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Elutriate VC14a(0.0-0.9m)(VC14a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC14a(0.9-1.9m)(VC14a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC5a(0.0-0.9m)(VC5a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC5a(0.9-1.9m)(VC5a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	0.01	0.02	<0.01	0.01	0.01	0.01
Elutriate VC15a(0.0-0.9m)(VC15a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC15a(0.9-1.9m)(VC15a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC13a(0.0-0.9m)(VC13a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC13a(0.9-1.9m)(VC13a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC4a(0.0-0.9m)(VC4a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC4a(0.9-1.9m)(VC4a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC6a(0.0-0.9m)(VC6a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC6a(0.9-1.9m)(VC6a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC3a(0.0-0.9m)(VC3a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC3a(0.9-1.9m)(VC3a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC7a(0.0-0.9m)(VC7a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC7a(0.9-1.9m)(VC7a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC2a(0.0-0.9m)(VC2a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC2a(0.9-1.9m)(VC2a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC11a(0.0-0.9m)(VC11a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC11a(0.9-1.9m)(VC11a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

**TEST REPORT**

**Report No.** : 100972N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
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 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department

**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results**

Customer Ref. Drillhole No.	Sample				118 ug/L	126 ug/L	128 ug/L	138 ug/L	153 ug/L	169 ug/L	170 ug/L	180 ug/L	187 ug/L
	Depth, m			Type Specimen Depth m									
	No.	From	To										
Elutriate VC14a(0.0-0.9m)(VC14a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC14a(0.9-1.9m)(VC14a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC5a(0.0-0.9m)(VC5a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC5a(0.9-1.9m)(VC5a)	N/A	N/A	N/A	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Elutriate VC15a(0.0-0.9m)(VC15a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC15a(0.9-1.9m)(VC15a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC13a(0.0-0.9m)(VC13a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC13a(0.9-1.9m)(VC13a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC4a(0.0-0.9m)(VC4a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC4a(0.9-1.9m)(VC4a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC6a(0.0-0.9m)(VC6a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC6a(0.9-1.9m)(VC6a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC3a(0.0-0.9m)(VC3a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC3a(0.9-1.9m)(VC3a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC7a(0.0-0.9m)(VC7a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC7a(0.9-1.9m)(VC7a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC2a(0.0-0.9m)(VC2a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC2a(0.9-1.9m)(VC2a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC11a(0.0-0.9m)(VC11a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC11a(0.9-1.9m)(VC11a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

**TEST REPORT**

**Report No.** : 100972N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
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 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department

**Lab Job No.** : J469

**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results**

Customer Ref. Drillhole No.	Sample				8 ug/L	18 ug/L	28 ug/L	44 ug/L	52 ug/L	66 ug/L	77 ug/L	101 ug/L	105 ug/L
	Depth, m			Type Specimen Depth m									
	No.	From	To										
Elutriate VC12a(0.0-0.9m)(VC12a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC12a(0.9-1.9m)(VC12a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC8a(0.0-0.9m)(VC8a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC8a(0.9-1.9m)(VC8a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	0.01	0.02	<0.01	0.01	0.01	0.01
Elutriate VC10a(0.0-0.9m)(VC10a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC10a(0.9-1.9m)(VC10a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC1a(0.0-0.9m)(VC1a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC1a(0.9-1.9m)(VC1a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC9a(0.0-0.9m)(VC9a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC9a(0.9-1.9m)(VC9a)	N/A	N/A	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

**TEST REPORT**

**Report No.** : 100972N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
 and Associated Land Mains From West Kowloon To Sai Ying Pung - Investigation  
 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
**Customer** : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department

**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results**

Customer Ref. Drillhole No.	Sample				118 ug/L	126 ug/L	128 ug/L	138 ug/L	153 ug/L	169 ug/L	170 ug/L	180 ug/L	187 ug/L	
	Depth, m			Type Specimen Depth m										
	No.	From	To											
Elutriate VC12a(0.0-0.9m)(VC12a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC12a(0.9-1.9m)(VC12a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC8a(0.0-0.9m)(VC8a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC8a(0.9-1.9m)(VC8a)	N/A	N/A	N/A		N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Elutriate VC10a(0.0-0.9m)(VC10a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC10a(0.9-1.9m)(VC10a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC1a(0.0-0.9m)(VC1a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC1a(0.9-1.9m)(VC1a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC9a(0.0-0.9m)(VC9a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Elutriate VC9a(0.9-1.9m)(VC9a)	N/A	N/A	N/A		N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

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

QUALITY CONTROL REPORT

Report No. : 100972N  
 Project Name : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
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 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
 Customer : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  
 Lab Job No. : J469  
 Lab Sample No. : 17986,17999,18015,18026,18044,18071,18079,18105,18122  
 Test Results

## 1.1 Sample Duplicate

Customer Ref. Drillhole No.	Sample				Batch	8	18	28	44	52	66	77	101	105
	Depth, m			Type		Specimen Depth m	%	%	%	%	%	%	%	%
	No.	From	To				%	%	%	%	%	%	%	
18011/1	N/A	N/A	N/A		N/A	1	na*	na*	na*	na*	na*	na*	na*	na*
Elutriate VC3a(0.0-0.9m) (VC3a)	N/A	N/A	N/A		N/A	2	na*	na*	na*	na*	na*	na*	na*	na*
Control Limit						+/- 30% of the mean								

## 1.2 Sample Spike (Spike Level = 1 ug)


Customer Ref. Drillhole No.	Sample				Batch	8	18	28	44	52	66	77	101	105
	Depth, m			Type		Specimen Depth m	%	%	%	%	%	%	%	%
	No.	From	To				%	%	%	%	%	%	%	
18011/2	N/A	N/A	N/A		N/A	1	84	83	80	86	97	89	75	94
Elutriate VC3a(0.9-1.9m) (VC3a)	N/A	N/A	N/A		N/A	2	79	95	88	92	92	94	80	105
Control Limit						70-130 %								

## Notes :

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

Authorized Signatory :

Issue Date: 27 Dec. 2006

  
 Wong Yau Tim  
 (Operations Manager)

**QUALITY CONTROL REPORT**

**Report No.** : 100972N  
**Project Name** : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
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**Lab Job No.** : J469  
**Lab Sample No.** : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results****2.1 Sample Duplicate**

Customer Ref. Drillhole No.	Sample				Batch	118	126	128	138	153	169	170	180	187
	Depth, m			Type		Specimen Depth m.	%	%	%	%	%	%	%	%
	No.	From	To				%	%	%	%	%	%	%	
18011/1	N/A	N/A	N/A		N/A	1	na*	na*	na*	na*	na*	na*	na*	na*
Elutriate VC3a(0.0-0.9m) (VC3a)	N/A	N/A	N/A		N/A	2	na*	na*	na*	na*	na*	na*	na*	na*
Control Limit						+/- 30% of the mean								

**2.2 Sample Spike (Spike Level = 1 ug)**

Customer Ref. Drillhole No.	Sample				Batch	118	126	128	138	153	169	170	180	187	
	Depth, m			Type		Specimen Depth m.	%	%	%	%	%	%	%	%	
	No.	From	To				%	%	%	%	%	%	%		
18011/2	N/A	N/A	N/A		N/A	1	76	83	83	95	81	77	83	85	101
Elutriate VC3a(0.9-1.9m) (VC3a)	N/A	N/A	N/A		N/A	2	91	92	95	99	87	98	91	97	90
Control Limit						70-130 %									

## Notes :

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

QUALITY CONTROL REPORT

Report No. : 100972N  
 Project Name : Chemical and Biological Testing of Sediment (Service Contract)  
 Agreement No. CE 42/2005 (WS) Laying of Western Cross Harbour Main  
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 Chemical, Elutriate and Biological Testing of Marine Sediment and Seawater Samples  
 Customer : Geotechnical Projects Division, Geotechnical Engineering office,  
 Civil Engineering and Development Department  
 Lab Job No. : J469  
 Lab Sample No. : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results****1.3 QC Sample (Spike Level = 1 ug)**

Customer Ref.	Sample					Batch	8	18	28	44	52	66	77	101	105
	Depth, m			Type	Specimen		%	%	%	%	%	%	%	%	%
Drillhole No.	No.	From	To		Depth m										
Method Blank	N/A	N/A	N/A		N/A	1	84	97	80	99	103	89	74	96	81
Method Blank	N/A	N/A	N/A		N/A	2	88	106	87	101	102	92	89	106	103
Control Limit							70-130 %								

**1.4 Method Blank**

Customer Ref.	Sample					Batch	8	18	28	44	52	66	77	101	105
	Depth, m			Type	Specimen		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Drillhole No.	No.	From	To		Depth m										
N/A	N/A	N/A	N/A		N/A	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N/A	N/A	N/A	N/A		N/A	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Control Limit							Less than reporting limit								



**QUALITY CONTROL REPORT**

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 Customer : Geotechnical Projects Division, Geotechnical Engineering office,  
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Lab Job No. : J469

Lab Sample No. : 17986,17999,18015,18026,18044,18071,18079,18105,18122

**Test Results****2.3 QC Sample (Spike Level = 1 ug)**

Customer Ref.	Sample					Batch	118	126	128	138	153	169	170	180	187
	Depth, m			Type	Specimen Depth m		%	%	%	%	%	%	%	%	%
	No.	From	To				%	%	%	%	%	%	%	%	%
Method Blank	N/A	N/A	N/A		N/A	1	82	92	87	89	80	77	91	83	90
Method Blank	N/A	N/A	N/A		N/A	2	89	92	97	100	84	99	99	95	91
Control Limit							70-130 %								

**2.4 Method Blank**

Customer Ref.	Sample					Batch	118	126	128	138	153	169	170	180	187
	Depth, m			Type	Specimen Depth m		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
	No.	From	To				ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
N/A	N/A	N/A	N/A		N/A	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
N/A	N/A	N/A	N/A		N/A	2	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Control Limit							Less than reporting limit								