

Annex B2

## Castable and Refractory Bricks Analysis Results



### CERTIFICATE OF ANALYSIS

<i>Client</i>	: GREEN ISLAND CEMENT CO LIMITED	<i>Laboratory</i>	: ALS Technichem (HK) Pty Ltd	<i>Page</i>	: 1 of 9
<i>Contact</i>	: MR SUNNY KWONG	<i>Contact</i>	: Alice Wong	<i>Work Order</i>	: HK0806570
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<i>Project</i>	: (ERM 0071019)	<i>Quote number</i>	: ---	<i>Date received</i>	: 26 Apr 2008
<i>Order number</i>	: ---			<i>Date of issue</i>	:
<i>C-O-C number</i>	: H002583-H002584			<i>No. of samples</i>	- Received : 13
<i>Site</i>	: GIC				- Analysed : 10

### Report Comments

This report for ALS Technichem (HK) Pty Ltd work order reference HK0806570 supersedes any previous reports with this reference. The completion date of analysis is 30 Apr 2008. Results apply to sample(s) as submitted. All pages of this report have been checked and approved for release. When date(s) and/or time(s) are shown bracketed, these have been assumed by the laboratory for process purposes. Abbreviations: CAS number = Chemical Abstract Services number. LOR = Limit of reporting.

Specific comments for Work Order HK0806570 :

**Sample(s) were picked up from client by ALS Technichem (HK) staff in an ambient condition.**

**Soil sample(s) analysed on an as received basis. Result(s) reported on a dry weight basis.**

**The metal concentrations reported are those determined on the TCLP leachate. Extraction Fluid #1 pH 4.88 - 4.98. Extraction Fluid #2 pH 2.83 - 2.93.**

**Soil sample(s) as received, digested by In-house method E-ASTM D3974-81 based on ASTM D3974-81, prior to the determination of metals.**

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

Signatory

Fung Lim Chee, Richard

Position

General Manager

Authorised results for:-

Inorganics

# PRELIMINARY RESULTS FOR REFERENCE ONLY

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 Client : GREEN ISLAND CEMENT CO LIMITED  
 Work Order : HK0806570



## Analytical Results

				Client Sample ID :	S1	S2	S3	S41	S5		
				Laboratory Sample ID :	HK0806570-001	HK0806570-002	HK0806570-003	HK0806570-005	HK0806570-007		
				Sample Date / Time :	25 Apr 2008 10:00	25 Apr 2008 11:00	25 Apr 2008 13:30	25 Apr 2008 14:00	25 Apr 2008 14:30		
Submatrix: SOIL				Method: Analysis Description	CAS number	LOR	Units				
<b>EA/ED: Physical and Aggregate Properties</b>											
EA055: Moisture Content (dried @ 103°C)				----	0.1	%	<0.1	<0.1	<0.1	<0.1	<0.1
<b>EG: Metals and Major Cations</b>											
EG020: Antimony	7440-36-0	1	mg/kg	1	<1	3	<1	2			
EG020: Arsenic	7440-38-2	1	mg/kg	5	4	4	<1	12			
EG020: Barium	7440-39-3	1	mg/kg	38	18	141	33	43			
EG020: Cadmium	7440-43-9	0.2	mg/kg	0.3	0.3	1.6	<0.2	0.7			
EG020: Cobalt	7440-48-4	1	mg/kg	<1	2	3	<1	<1			
EG020: Copper	7440-50-8	1	mg/kg	25	4	18	5	5			
EG020: Lead	7439-92-1	1	mg/kg	13	9	67	72	63			
EG020: Manganese	7439-96-5	1	mg/kg	47	26	72	33	53			
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05			
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	<1	<1	3			
EG020: Nickel	7440-02-0	1	mg/kg	11	3	7	<1	<1			
EG020: Thallium	7440-28-0	1	mg/kg	<1	<1	<1	<1	<1			
EG020: Tin	7440-31-5	1	mg/kg	10	<1	14	<1	6			
EG020: Vanadium	7440-62-2	1	mg/kg	32	28	48	82	57			
EG020: Zinc	7440-66-6	1	mg/kg	77	3	72	37	24			
EG049: Trivalent Chromium	16065-83-1	1	mg/kg	8	3	14	2	12			
EG050: Hexavalent Chromium	18540-29-9	1	mg/kg	<1	<1	<1	<1	<1			

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 Client : GREEN ISLAND CEMENT CO LIMITED  
 Work Order : HK0806570



## Analytical Results

				Client Sample ID :	S6	S7	S8	S9	S10			
				Laboratory Sample ID :	HK0806570-008	HK0806570-009	HK0806570-010	HK0806570-012	HK0806570-013			
				Sample Date / Time :	25 Apr 2008 15:00	25 Apr 2008 16:00	25 Apr 2008 16:00	25 Apr 2008 16:30	25 Apr 2008 16:30			
Submatrix: SOIL				Method: Analysis Description	CAS number	LOR	Units					
<b>EA/ED: Physical and Aggregate Properties</b>												
EA055: Moisture Content (dried @ 103°C)					----	0.1	%	<0.1	0.2	3.2	13.9	0.2
<b>EG: Metals and Major Cations</b>												
EG020: Antimony					7440-36-0	1	mg/kg	<1	<1	<1	3	<1
EG020: Arsenic					7440-38-2	1	mg/kg	3	2	2	6	3
EG020: Barium					7440-39-3	1	mg/kg	37	36	67	137	29
EG020: Cadmium					7440-43-9	0.2	mg/kg	0.3	0.3	<0.2	4.1	<0.2
EG020: Cobalt					7440-48-4	1	mg/kg	2	<1	2	10	1
EG020: Copper					7440-50-8	1	mg/kg	15	6	19	41	18
EG020: Lead					7439-92-1	1	mg/kg	22	34	94	200	13
EG020: Manganese					7439-96-5	1	mg/kg	49	37	83	600	66
EG020: Mercury					7439-97-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EG020: Molybdenum					7439-98-7	1	mg/kg	1	<1	1	13	2
EG020: Nickel					7440-02-0	1	mg/kg	7	4	15	310	6
EG020: Thallium					7440-28-0	1	mg/kg	<1	<1	<1	<1	<1
EG020: Tin					7440-31-5	1	mg/kg	3	2	2	11	3
EG020: Vanadium					7440-62-2	1	mg/kg	79	80	77	23	62
EG020: Zinc					7440-66-6	1	mg/kg	236	9	18	77	14
EG049: Trivalent Chromium					16065-83-1	1	mg/kg	21	26	35	315	39
EG050: Hexavalent Chromium					18540-29-9	1	mg/kg	1	14	4	128	6

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 Work Order : HK0806570



## Analytical Results

				Client Sample ID :	S1	S2	S3	S41	S5	
				Laboratory Sample ID :	HK0806570-001	HK0806570-002	HK0806570-003	HK0806570-005	HK0806570-007	
				Sample Date / Time :	25 Apr 2008 12:00	25 Apr 2008 12:00	25 Apr 2008 12:00	25 Apr 2008 12:00	25 Apr 2008 12:00	
Submatrix: TCLP LEACHATE				Method: Analysis Description	CAS number	LOR	Units			
<b>EG: Metals and Major Cations - Filtered</b>										
EG020: Antimony	7440-36-0	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Arsenic	7440-38-2	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Barium	7440-39-3	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Beryllium	7440-41-7	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Cadmium	7440-43-9	0.2	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
EG020: Chromium	7440-47-3	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Copper	7440-50-8	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Lead	7439-92-1	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Mercury	7439-97-6	0.2	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
EG020: Nickel	7440-02-0	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Selenium	7782-49-2	0.2	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
EG020: Silver	7440-22-4	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Thallium	7440-28-0	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Tin	7440-31-5	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Vanadium	7440-62-2	1	mg/L	<1	<1	<1	<1	<1	<1	
EG020: Zinc	7440-66-6	1	mg/L	<1	<1	<1	<1	<1	<1	
<b>Sample Preparation Method</b>										
E-TCLP: Extraction Fluid Number	----	-	--	1	1	1	1	1	1	

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## Analytical Results

				S6	S7	S8	S9	S10
Client Sample ID :				HK0806570-008	HK0806570-009	HK0806570-010	HK0806570-012	HK0806570-013
Laboratory Sample ID :								
Submatrix: TCLP LEACHATE								
Sample Date / Time :				25 Apr 2008 12:00	25 Apr 2008 12:00	25 Apr 2008 12:00	25 Apr 2008 12:00	25 Apr 2008 12:00
Method: Analysis Description	CAS number	LOR	Units					
<b>EG: Metals and Major Cations - Filtered</b>								
EG020: Antimony	7440-36-0	1	mg/L	<1	<1	<1	<1	<1
EG020: Arsenic	7440-38-2	1	mg/L	<1	<1	<1	<1	<1
EG020: Barium	7440-39-3	1	mg/L	<1	<1	<1	<1	<1
EG020: Beryllium	7440-41-7	1	mg/L	<1	<1	<1	<1	<1
EG020: Cadmium	7440-43-9	0.2	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2
EG020: Chromium	7440-47-3	1	mg/L	<1	<1	<1	4	<1
EG020: Copper	7440-50-8	1	mg/L	<1	<1	<1	<1	<1
EG020: Lead	7439-92-1	1	mg/L	<1	<1	<1	<1	<1
EG020: Mercury	7439-97-6	0.2	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2
EG020: Nickel	7440-02-0	1	mg/L	<1	<1	<1	<1	<1
EG020: Selenium	7782-49-2	0.2	mg/L	<0.2	<0.2	<0.2	<0.2	<0.2
EG020: Silver	7440-22-4	1	mg/L	<1	<1	<1	<1	<1
EG020: Thallium	7440-28-0	1	mg/L	<1	<1	<1	<1	<1
EG020: Tin	7440-31-5	1	mg/L	<1	<1	<1	<1	<1
EG020: Vanadium	7440-62-2	1	mg/L	<1	<1	<1	<1	<1
EG020: Zinc	7440-66-6	1	mg/L	<1	<1	<1	<1	<1
<b>Sample Preparation Method</b>								
E-TCLP: Extraction Fluid Number	----	-	--	1	1	1	2	1

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## Quality Control - Laboratory Duplicate (DUP) Results

Matrix Type: SOIL				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 646399)</b>								
HK0806106-001	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	52.7	52.5	0.3
HK0806106-011	Anonymous	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	49.2	48.2	2.2
<b>EA/ED: Physical and Aggregate Properties (QC Lot: 646400)</b>								
HK0806570-013	S10	EA055: Moisture Content (dried @ 103°C)	----	0.1	%	0.2	0.3	0.0
<b>EG: Metals and Major Cations (QC Lot: 646406)</b>								
HK0806570-002	S2	EG020: Antimony	7440-36-0	1	mg/kg	<1	<1	0.0
		EG020: Lead	7439-92-1	1	mg/kg	9	7	15.7
		EG020: Manganese	7439-96-5	1	mg/kg	26	24	4.2
		EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	<0.05	0.0
		EG020: Molybdenum	7439-98-7	1	mg/kg	<1	<1	0.0
		EG020: Nickel	7440-02-0	1	mg/kg	3	2	0.0
		EG020: Thallium	7440-28-0	1	mg/kg	<1	<1	0.0
		EG020: Tin	7440-31-5	1	mg/kg	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/kg	4	4	0.0
		EG020: Vanadium	7440-62-2	1	mg/kg	28	26	7.0
		EG020: Zinc	7440-66-6	1	mg/kg	3	3	0.0
		EG020: Barium	7440-39-3	1	mg/kg	18	17	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/kg	0.3	0.2	0.0
		EG020: Cobalt	7440-48-4	1	mg/kg	2	1	0.0
		EG020: Copper	7440-50-8	1	mg/kg	4	4	0.0
<b>EG: Metals and Major Cations (QC Lot: 648311)</b>								
HK0806499-002	Anonymous	EG050: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0
HK0806570-001	S1	EG050: Hexavalent Chromium	18540-29-9	1	mg/kg	<1	<1	0.0

Matrix Type: WATER				Duplicate (DUP) Results				
Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	LOR	Units	Original Result	Duplicate Result	RPD (%)
<b>EG: Metals and Major Cations - Filtered (QC Lot: 650930)</b>								
HK0806570-002	S2	EG020: Antimony	7440-36-0	1	mg/L	<1	<1	0.0
		EG020: Lead	7439-92-1	1	mg/L	<1	<1	0.0
		EG020: Mercury	7439-97-6	0.2	mg/L	<0.2	<0.2	0.0
		EG020: Nickel	7440-02-0	1	mg/L	<1	<1	0.0
		EG020: Selenium	7782-49-2	0.2	mg/L	<0.2	<0.2	0.0
		EG020: Silver	7440-22-4	1	mg/L	<1	<1	0.0
		EG020: Thallium	7440-28-0	1	mg/L	<1	<1	0.0
		EG020: Tin	7440-31-5	1	mg/L	<1	<1	0.0
		EG020: Arsenic	7440-38-2	1	mg/L	<1	<1	0.0
		EG020: Vanadium	7440-62-2	1	mg/L	<1	<1	0.0

# PRELIMINARY RESULTS FOR REFERENCE ONLY

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**Matrix Type: WATER**

Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Duplicate (DUP) Results				
				LOR	Units	Original Result	Duplicate Result	RPD (%)
<b>EG: Metals and Major Cations - Filtered (QC Lot: 650930) - continued</b>								
HK0806570-002	S2	EG020: Zinc	7440-66-6	1	mg/L	<1	<1	0.0
		EG020: Barium	7440-39-3	1	mg/L	<1	<1	0.0
		EG020: Beryllium	7440-41-7	1	mg/L	<1	<1	0.0
		EG020: Cadmium	7440-43-9	0.2	mg/L	<0.2	<0.2	0.0
		EG020: Chromium	7440-47-3	1	mg/L	<1	<1	0.0
		EG020: Copper	7440-50-8	1	mg/L	<1	<1	0.0

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

Matrix Type: SOIL		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
<b>EG: Metals and Major Cations (QC Lot: 646406)</b>											
EG020: Antimony	7440-36-0	1	mg/kg	<1	5 mg/kg	90.7	----	85	115	----	----
EG020: Lead	7439-92-1	1	mg/kg	<1	5 mg/kg	90.2	----	85	115	----	----
EG020: Manganese	7439-96-5	1	mg/kg	<1	5 mg/kg	89.9	----	85	115	----	----
EG020: Mercury	7439-97-6	0.05	mg/kg	<0.05	0.1 mg/kg	105	----	85	115	----	----
EG020: Molybdenum	7439-98-7	1	mg/kg	<1	5 mg/kg	96.4	----	85	115	----	----
EG020: Nickel	7440-02-0	1	mg/kg	<1	5 mg/kg	88.4	----	85	115	----	----
EG020: Thallium	7440-28-0	1	mg/kg	<1	5 mg/kg	92.9	----	85	115	----	----
EG020: Tin	7440-31-5	1	mg/kg	<1	5 mg/kg	95.2	----	85	115	----	----
EG020: Arsenic	7440-38-2	1	mg/kg	<1	5 mg/kg	85.5	----	85	115	----	----
EG020: Vanadium	7440-62-2	1	mg/kg	<1	5 mg/kg	86.6	----	85	115	----	----
EG020: Zinc	7440-66-6	1	mg/kg	<1	5 mg/kg	85.4	----	85	115	----	----
EG020: Barium	7440-39-3	1	mg/kg	<1	5 mg/kg	97.0	----	85	115	----	----
EG020: Cadmium	7440-43-9	0.2	mg/kg	<0.2	5 mg/kg	95.4	----	85	115	----	----
EG020: Cobalt	7440-48-4	1	mg/kg	<1	5 mg/kg	88.3	----	85	115	----	----
EG020: Copper	7440-50-8	1	mg/kg	<1	5 mg/kg	93.2	----	85	115	----	----
<b>EG: Metals and Major Cations (QC Lot: 648311)</b>											
EG050: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	2.5 mg/kg	114	----	85	115	----	----

Matrix Type: WATER		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results						
Method: Analysis Description	CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
						SCS	DCS	Low	High	Value	Control Limit
<b>EG: Metals and Major Cations - Filtered (QC Lot: 650930)</b>											
EG020: Antimony	7440-36-0	0.001	mg/L	<1	1 mg/L	85.9	----	85	115	----	----
EG020: Lead	7439-92-1	0.001	mg/L	<0.1	1 mg/L	92.9	----	85	115	----	----
EG020: Mercury	7439-97-6	0.0001	mg/L	<0.2	0.02 mg/L	105	----	85	115	----	----
EG020: Nickel	7440-02-0	0.001	mg/L	<1	1 mg/L	98.3	----	85	115	----	----
EG020: Selenium	7782-49-2	0.01	mg/L	<0.2	1 mg/L	106	----	85	115	----	----



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## Matrix Type: WATER

Method: Analysis Description		Method Blank (MB) Results			Single Control Spike (SCS) and Duplicate Control Spike (DCS) Results							
		CAS number	LOR	Units	Result	Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
							SCS	DCS	Low	High	Value	Control Limit
<b>EG: Metals and Major Cations - Filtered (QCLot: 650930) - continued</b>												
EG020: Silver	7440-22-4	0.001	mg/L	<1	1 mg/L	95.6	----	85	115	----	----	
EG020: Thallium	7440-28-0	0.001	mg/L	<1	1 mg/L	89.2	----	85	115	----	----	
EG020: Tin	7440-31-5	0.01	mg/L	<1	1 mg/L	89.6	----	85	115	----	----	
EG020: Arsenic	7440-38-2	0.01	mg/L	<1	1 mg/L	104	----	85	115	----	----	
EG020: Vanadium	7440-62-2	0.01	mg/L	<1	1 mg/L	108	----	85	115	----	----	
EG020: Zinc	7440-66-6	0.01	mg/L	<1	1 mg/L	103	----	85	115	----	----	
EG020: Barium	7440-39-3	0.001	mg/L	<1	1 mg/L	90.2	----	85	115	----	----	
EG020: Beryllium	7440-41-7	0.001	mg/L	<1	1 mg/L	97.2	----	85	115	----	----	
EG020: Cadmium	7440-43-9	0.0002	mg/L	<0.2	1 mg/L	95.8	----	85	115	----	----	
EG020: Chromium	7440-47-3	0.001	mg/L	<0.1	1 mg/L	107	----	85	115	----	----	
EG020: Copper	7440-50-8	0.001	mg/L	<0.1	1 mg/L	102	----	85	115	----	----	

## Quality Control - Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results

### Matrix Type: SOIL

Laboratory Sample ID				Client Sample ID				Method: Analysis Description				CAS number				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results						
																Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
																	MS	MSD	Low	High	Value	Control Limit
<b>EG: Metals and Major Cations (QCLot: 646406)</b>																						
HK0806570-001	S1	EG020: Antimony	7440-36-0	5 mg/kg	79.6	----	75	125	----	----												
		EG020: Lead	7439-92-1	5 mg/kg	80.4	----	75	125	----	----												
		EG020: Manganese	7439-96-5	5 mg/kg	Not Determined	----	75	125	----	----												
		EG020: Mercury	7439-97-6	0.1 mg/kg	78.5	----	75	125	----	----												
		EG020: Molybdenum	7439-98-7	5 mg/kg	96.4	----	75	125	----	----												
		EG020: Nickel	7440-02-0	5 mg/kg	85.3	----	75	125	----	----												
		EG020: Thallium	7440-28-0	5 mg/kg	76.0	----	75	125	----	----												
		EG020: Tin	7440-31-5	5 mg/kg	86.6	----	75	125	----	----												
		EG020: Arsenic	7440-38-2	5 mg/kg	75.7	----	75	125	----	----												
		EG020: Vanadium	7440-62-2	5 mg/kg	Not Determined	----	75	125	----	----												
		EG020: Zinc	7440-66-6	5 mg/kg	Not Determined	----	75	125	----	----												
		EG020: Barium	7440-39-3	5 mg/kg	Not Determined	----	75	125	----	----												
		EG020: Cadmium	7440-43-9	5 mg/kg	95.2	----	75	125	----	----												
		EG020: Cobalt	7440-48-4	5 mg/kg	87.1	----	75	125	----	----												
		EG020: Copper	7440-50-8	5 mg/kg	Not Determined	----	75	125	----	----												
<b>EG: Metals and Major Cations (QCLot: 648311)</b>																						
HK0806499-001	Anonymous	EG050: Hexavalent Chromium	18540-29-9	2.5 mg/kg	117	----	75	125	----	----												

### Matrix Type: WATER

Laboratory Sample ID				Client Sample ID				Method: Analysis Description				CAS number				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results						
																Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
																	MS	MSD	Low	High	Value	Control Limit

# PRELIMINARY RESULTS FOR REFERENCE ONLY

Page Number : 9 of 9  
 Client : GREEN ISLAND CEMENT CO LIMITED  
 Work Order : HK0806570



Matrix Type: WATER

Laboratory Sample ID	Client Sample ID	Method: Analysis Description	CAS number	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Results						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
<b>EG: Metals and Major Cations - Filtered (QCLot: 650930)</b>										
HK0806570-001	S1	EG020: Antimony	7440-36-0	1 mg/L	86.5	86.5	75	125	0.0	----
		EG020: Lead	7439-92-1	1 mg/L	91.7	96.5	75	125	5.1	----
		EG020: Mercury	7439-97-6	0.02 mg/L	103	107	75	125	4.3	----
		EG020: Nickel	7440-02-0	1 mg/L	99.0	95.1	75	125	4.0	----
		EG020: Selenium	7782-49-2	1 mg/L	102	103	75	125	0.8	----
		EG020: Silver	7440-22-4	1 mg/L	94.2	94.8	75	125	0.6	----
		EG020: Thallium	7440-28-0	1 mg/L	90.4	91.6	75	125	1.2	----
		EG020: Tin	7440-31-5	1 mg/L	91.4	91.1	75	125	0.3	----
		EG020: Arsenic	7440-38-2	1 mg/L	107	105	75	125	2.0	----
		EG020: Vanadium	7440-62-2	1 mg/L	106	105	75	125	0.7	----
		EG020: Zinc	7440-66-6	1 mg/L	103	99.4	75	125	3.8	----
		EG020: Barium	7440-39-3	1 mg/L	89.0	86.7	75	125	2.6	----
		EG020: Beryllium	7440-41-7	1 mg/L	96.5	95.9	75	125	0.6	----
		EG020: Cadmium	7440-43-9	1 mg/L	93.7	93.4	75	125	0.3	----
		EG020: Chromium	7440-47-3	1 mg/L	106	104	75	125	2.1	----
		EG020: Copper	7440-50-8	1 mg/L	102	102	75	125	1.0	----

# ALS Laboratory Group

ANALYTICAL CHEMISTRY & TESTING SERVICES

## ALS TECHNICHEM (HK) Pty Ltd

Environmental Division



### CERTIFICATE OF ANALYSIS

**CONTACT:** MR SUNNY KWONG  
**CLIENT:** GREEN ISLAND INTERNATIONAL (BVI) LTD  
**ADDRESS:** NO.7, LUNG YIU STREET,  
TAP SHEK KOK, TUEN MUN,  
N.T., HONG KONG  
**PROJECT:** (ERM 0071019)  
**SITE:** GIC

**Batch:** HK0806570  
**LABORATORY:** HONG KONG  
**DATE RECEIVED:** 26/04/2008  
**DATE OF ISSUE:** 20/05/2008  
**SAMPLE TYPE:** ASH  
**No. of SAMPLES:** 3

### COMMENTS

Sample(s) were collected by ALS Technichem (HK) staff on 26 April, 2008.  
Dioxin and Furan were subcontracted and tested by ALS Czech Republic.  
ALS Czech Republic details report was attached. The attached report contains a total of 4 pages.

### Sample Details


<i>ALS Lab ID</i>	<i>Sample ID</i>	<i>Date of Sampling</i>	<i>Time of Sampling</i>
HK0806570-4	S1-S3 MIX	25/04/2008	13:30
HK0806570-6	S4-2	25/04/2008	14:00
HK0806570-11	S7-S8 MIX	25/04/2008	16:00

### ISSUING LABORATORY: HONG KONG

#### Address

ALS Technichem (HK) Pty Ltd  
11/F Chung Shun Knitting Centre  
1-3 Wing Yip Street  
Kwai Chung  
HONG KONG

**Phone:** 852-2610 1044  
**Fax:** 852-2610 2021  
**Email:** hongkong@alsenviro.com

  
Ms Wong Wai Man, Alice  
Laboratory Manager - Hong Kong

#### Other ALS Environmental Laboratories

<b>AUSTRALIA</b>	<b>AMERICAS</b>
Brisbane	Hong Kong
Melbourne	Singapore
Sydney	Kuala Lumpur
Newcastle	Bogor
	Vancouver
	Santiago
	Amtofagasta
	Lima

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

ALS Technichem (HK) Pty Ltd  
Part of the ALS Laboratory Group

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Phone: 852-2610 1044 Fax: 852-2610 2021 www.alsenviro.com  
A Campbell Brothers Limited Company



ALS Czech Republic, s.r.o., Na Harfě 336/9, 190 00 Praha 9

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ALS Technichem (HK) Pty Ltd  
 11/F, Chung Shun Knitting Centre  
 Richard Fung  
 1-3 Wing Yip Street  
 Kwai Chung  
 Hong Kong

**Test Report No. 9413 / 1 / 2008**

Prague : 16.5.2008

**Project:** Shipment 941708517839  
**Date of sampling:** -  
**Date of receipt:** 30.4.2008  
**Sampling procedure:** Sampling was performed by the client  
**Date of test performance:** 30.4. - 16.5.2008  
**Place of test performance:** ALS Czech Republic, s.r.o., Laboratoř HRMS, V Ráji 906, 530 02 Pardubice - D06\_06\_175  
 ALS Czech Republic, s.r.o., Na Harfě 336/9, 190 00, Praha 9

**Test specification, deviations, additions to or exclusions from the test specification and any other information:**

Č-I-11465 Determination of dry matter according to internal instructions  
 D06\_06\_175 Determination of polychlorinated dibenzo-p-dioxins and dibenzofurans according to US EPA 1613.  
 Analysed by technique: HRGC/HRMS system - Agilent 6890N/Finnigan MAT 95XP resp. Trace GC  
 Ultra/DFS. Resolution HRMS: 10000

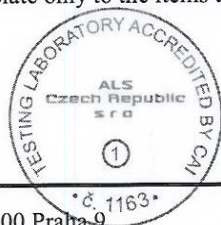
**Measurement results**

sample name	HK0806570-4 (S-S3 MIX)	HK0806570-6 (S4-2)	HK0806570-1 1 (S7-S8 MIX)	unit	test specification
	matrix	soil	soil		
parameter	result MU	result MU	result MU		
Dry matter at 105 °C	100 ±5	100 ±5	98,8 ±5	%	Č-I-11465 A
I-TEQ (PCDD/F) lowerb	0 ±20	0 ±20	0 ±20	ng/g dw	D06 06 175 A
I-TEQ (PCDD/F) upperb	0,0016	0,0017	0,0013	ng/g dw	D06 06 175 A

Measurement uncertainty (MU [%]) is expressed as expanded measurement uncertainty with coverage factor k = 2, representing of 95 % significance level.

Parameters indexed by 'A' in the last column of the table are accredited, parameters indexed by 'N' are not accredited.

The report shall not be reproduced except in full without the written approval of the testing laboratory.  
 The laboratory declares that the test results relate only to the items tested and do not substitute any other documents.



**Ing. Emilie Pokorna**  
 Laboratory Manager Prague

## Annex No. 1 to test Report No. 9413/1/2008

**Sample: HK0806570-4 (S-S3 MIX)**

**Measurement results:**

Sample: HK0806570-4 (S-S3 MIX)		Final extract [ $\mu$ l]: 75			
Sample weight [g]: 4.525		Injection volume [ $\mu$ l]: 2			
Dry matter [%]: 100		Acquisition date [d.m.y h:m]: 9.5.08 10:54			
2,3,7,8-PCDD/Fs	Content [ng/g dw]	Limit of Detection [ng/g dw]	Limit of Quantification [ng/g dw]	<sup>1</sup> I-TEFs	I-TEQ [ng/g dw]
2,3,7,8-TCDD	n.d.	0.00026	0.00051	1	0
1,2,3,7,8-PeCDD	n.d.	0.00051	0.0010	0.5	0
1,2,3,4,7,8-HxCDD	n.d.	0.00088	0.0018	0.1	0
1,2,3,6,7,8-HxCDD	n.d.	0.00088	0.0018	0.1	0
1,2,3,7,8,9-HxCDD	n.d.	0.00088	0.0018	0.1	0
1,2,3,4,6,7,8-HpCDD	n.d.	0.0014	0.0027	0.01	0
OCDD	n.d.	0.0017	0.0034	0.001	0
2,3,7,8-TCDF	n.d.	0.00036	0.00072	0.1	0
1,2,3,7,8-PeCDF	n.d.	0.00050	0.0010	0.05	0
2,3,4,7,8-PeCDF	n.d.	0.00050	0.0010	0.5	0
1,2,3,4,7,8-HxCDF	n.d.	0.0011	0.0022	0.1	0
1,2,3,6,7,8-HxCDF	n.d.	0.0011	0.0022	0.1	0
1,2,3,7,8,9-HxCDF	n.d.	0.0011	0.0022	0.1	0
2,3,4,6,7,8-HxCDF	n.d.	0.0011	0.0022	0.1	0
1,2,3,4,6,7,8-HpCDF	n.d.	0.0012	0.0024	0.01	0
1,2,3,4,7,8,9-HpCDF	n.d.	0.0012	0.0024	0.01	0
OCDF	n.d.	0.0021	0.0041	0.001	0
<b>I-TEQ from quantified 2,3,7,8-PCDD/Fs [ng 2,3,7,8-TCDD/g dw]-"Lowerbound"</b>					<b>0</b>
I-TEQ from quantified 2,3,7,8-PCDDs [ng 2,3,7,8-TCDD/g dw]					0
I-TEQ from quantified 2,3,7,8-PCDFs [ng 2,3,7,8-TCDD/g dw]					0
I-TEQ from n.d. and non quantified 2,3,7,8-PCDD/Fs [ng 2,3,7,8-TCDD/g dw]					0.0016
<b>Maximum possible I-TEQ [ng 2,3,7,8-TCDD/g dw]-"Upperbound"</b>					<b>0.0016</b>
PCDDs	Content [ng/g dw]	PCDFs	Content [ng/g dw]		
Tetra-CDDs	n.d.	Tetra-CDFs	n.d.		
Penta-CDDs	n.d.	Penta-CDFs	n.d.		
Hexa-CDDs	n.d.	Hexa-CDFs	n.d.		
Hepta-CDDs	n.d.	Hepta-CDFs	n.d.		
OCDD	n.d.	OCDF	n.d.		
<b>Total PCDDs</b>	<b>n.d.</b>	<b>Total PCDFs</b>	<b>n.d.</b>		

<sup>1</sup>I-TEF according to NATO.

The limits of quantification are defined as the double of the detection limits.

The limit of detection is defined as the amount of analyte producing a signal with  $S/N \geq 3$ .

The value of the detection limit is mentioned as the actual value at the acquisition date.

Measurement uncertainty is expressed as a double ( $k=2$ ) relative standard deviation (RSD%), and corresponds to 95% interval of reliability.

Estimation of uncertainty of each 2,3,7,8-PCDD/F congener is 30% and total I-TEQ is 20%.

These values were ensured by analyses of certified reference material under conditions of internal reproducibility. Results marked "<" are situated in the interval of the limit of detection and the limit of quantification and are not quantified.

Results marked "n.d." are lower than the limit of detection.

"Lowerbound" and "Upperbound" are levels defined in Directive 2002/69/EC and 2002/70/EC.

## Annex No. 1 to test Report No. 9413/1/2008

**Sample: HK0806570-6 (S4-2)**

**Measurement results:**

Sample: HK0806570-6 (S4-2)		Final extract [ $\mu$ l]:		75	
Sample weight [g]: 5.088		Injection volume [ $\mu$ l]:		2	
Dry matter [%]: 100		Acquisition date [d.m.y h:m]:		9.5.08 11:47	
2,3,7,8-PCDD/Fs	Content [ng/g dw]	Limit of Detection [ng/g dw]	Limit of Quantification [ng/g dw]	<sup>1</sup> I-TEFs	I-TEQ [ng/g dw]
2,3,7,8-TCDD	n.d.	0.00035	0.00069	1	0
1,2,3,7,8-PeCDD	n.d.	0.00068	0.0014	0.5	0
1,2,3,4,7,8-HxCDD	n.d.	0.00087	0.0017	0.1	0
1,2,3,6,7,8-HxCDD	n.d.	0.00087	0.0017	0.1	0
1,2,3,7,8,9-HxCDD	n.d.	0.00087	0.0017	0.1	0
1,2,3,4,6,7,8-HpCDD	n.d.	0.0012	0.0024	0.01	0
OCDD	n.d.	0.0016	0.0031	0.001	0
2,3,7,8-TCDF	n.d.	0.00030	0.00061	0.1	0
1,2,3,7,8-PeCDF	n.d.	0.00048	0.00097	0.05	0
2,3,4,7,8-PeCDF	n.d.	0.00048	0.00097	0.5	0
1,2,3,4,7,8-HxCDF	n.d.	0.0011	0.0021	0.1	0
1,2,3,6,7,8-HxCDF	n.d.	0.0011	0.0021	0.1	0
1,2,3,7,8,9-HxCDF	n.d.	0.0011	0.0021	0.1	0
2,3,4,6,7,8-HxCDF	n.d.	0.0011	0.0021	0.1	0
1,2,3,4,6,7,8-HpCDF	n.d.	0.0015	0.0030	0.01	0
1,2,3,4,7,8,9-HpCDF	n.d.	0.0015	0.0030	0.01	0
OCDF	n.d.	0.0019	0.0038	0.001	0
<b>I-TEQ from quantified 2,3,7,8-PCDD/Fs [ng 2,3,7,8-TCDD/g dw]-"Lowerbound"</b>					<b>0</b>
I-TEQ from quantified 2,3,7,8-PCDDs [ng 2,3,7,8-TCDD/g dw]					0
I-TEQ from quantified 2,3,7,8-PCDFs [ng 2,3,7,8-TCDD/g dw]					0
I-TEQ from n.d. and non quantified 2,3,7,8-PCDD/Fs [ng 2,3,7,8-TCDD/g dw]					0.0017
<b>Maximum possible I-TEQ [ng 2,3,7,8-TCDD/g dw]-"Upperbound"</b>					<b>0.0017</b>
PCDDs	Content [ng/g dw]		PCDFs	Content [ng/g dw]	
Tetra-CDDs	n.d.		Tetra-CDFs	n.d.	
Penta-CDDs	n.d.		Penta-CDFs	n.d.	
Hexa-CDDs	n.d.		Hexa-CDFs	n.d.	
Hepta-CDDs	n.d.		Hepta-CDFs	n.d.	
OCDD	n.d.		OCDF	n.d.	
<b>Total PCDDs</b>	<b>n.d.</b>		<b>Total PCDFs</b>	<b>n.d.</b>	

<sup>1</sup>I-TEF according to NATO.

The limits of quantification are defined as the double of the detection limits.

The limit of detection is defined as the amount of analyte producing a signal with  $S/N \geq 3$ .

The value of the detection limit is mentioned as the actual value at the acquisition date.

Measurement uncertainty is expressed as a double ( $k=2$ ) relative standard deviation (RSD%), and corresponds to 95% interval of reliability.

Estimation of uncertainty of each 2,3,7,8-PCDD/F congener is 30% and total I-TEQ is 20%.

These values were ensured by analyses of certified reference material under conditions of internal reproducibility. Results marked "<" are situated in the interval of the limit of detection and the limit of quantification and are not quantified.

Results marked "n.d." are lower than the limit of detection.

"Lowerbound" and "Upperbound" are levels defined in Directive 2002/69/EC and 2002/70/EC.

## Annex No. 1 to test Report No. 9413/1/2008

**Sample: HK0806570-11 (S7-S8 MIX)**

**Measurement results:**

Sample: HK0806570-11 (S7-S8 MIX)		Final extract [ $\mu$ l]:		75	
Sample weight [g]: 5.001		Injection volume [ $\mu$ l]:		2	
Dry matter [%]: 98.8		Acquisition date [d.m.y h:m]:		9.5.08 12:44	
2,3,7,8-PCDD/Fs	Content [ng/g dw]	Limit of Detection [ng/g dw]	Limit of Quantification [ng/g dw]	<sup>1</sup> I-TEFs	I-TEQ [ng/g dw]
2,3,7,8-TCDD	n.d.	0.00025	0.00051	1	0
1,2,3,7,8-PeCDD	n.d.	0.00046	0.00092	0.5	0
1,2,3,4,7,8-HxCDD	n.d.	0.00085	0.0017	0.1	0
1,2,3,6,7,8-HxCDD	n.d.	0.00085	0.0017	0.1	0
1,2,3,7,8,9-HxCDD	n.d.	0.00085	0.0017	0.1	0
1,2,3,4,6,7,8-HpCDD	n.d.	0.0011	0.0023	0.01	0
OCDD	n.d.	0.0015	0.0030	0.001	0
2,3,7,8-TCDF	n.d.	0.00028	0.00055	0.1	0
1,2,3,7,8-PeCDF	n.d.	0.00038	0.00075	0.05	0
2,3,4,7,8-PeCDF	n.d.	0.00038	0.00075	0.5	0
1,2,3,4,7,8-HxCDF	n.d.	0.00081	0.0016	0.1	0
1,2,3,6,7,8-HxCDF	n.d.	0.00081	0.0016	0.1	0
1,2,3,7,8,9-HxCDF	n.d.	0.00081	0.0016	0.1	0
2,3,4,6,7,8-HxCDF	n.d.	0.00081	0.0016	0.1	0
1,2,3,4,6,7,8-HpCDF	n.d.	0.0010	0.0020	0.01	0
1,2,3,4,7,8,9-HpCDF	n.d.	0.0010	0.0020	0.01	0
OCDF	n.d.	0.0018	0.0037	0.001	0
<b>I-TEQ from quantified 2,3,7,8-PCDD/Fs [ng 2,3,7,8-TCDD/g dw]-"Lowerbound"</b>					<b>0</b>
I-TEQ from quantified 2,3,7,8-PCDDs [ng 2,3,7,8-TCDD/g dw]					0
I-TEQ from quantified 2,3,7,8-PCDFs [ng 2,3,7,8-TCDD/g dw]					0
I-TEQ from n.d. and non quantified 2,3,7,8-PCDD/Fs [ng 2,3,7,8-TCDD/g dw]					0.0013
<b>Maximum possible I-TEQ [ng 2,3,7,8-TCDD/g dw]-"Upperbound"</b>					<b>0.0013</b>
PCDDs	Content [ng/g dw]	PCDFs		Content [ng/g dw]	
Tetra-CDDs	n.d.	Tetra-CDFs		n.d.	
Penta-CDDs	n.d.	Penta-CDFs		n.d.	
Hexa-CDDs	n.d.	Hexa-CDFs		n.d.	
Hepta-CDDs	n.d.	Hepta-CDFs		n.d.	
OCDD	n.d.	OCDF		n.d.	
<b>Total PCDDs</b>	<b>n.d.</b>	<b>Total PCDFs</b>		<b>n.d.</b>	

<sup>1</sup>I-TEF according to NATO.

The limits of quantification are defined as the double of the detection limits.

The limit of detection is defined as the amount of analyte producing a signal with  $S/N \geq 3$ .

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Measurement uncertainty is expressed as a double ( $k=2$ ) relative standard deviation (RSD%), and corresponds to 95% interval of reliability.

Estimation of uncertainty of each 2,3,7,8-PCDD/F congener is 30% and total I-TEQ is 20%.

These values were ensured by analyses of certified reference material under conditions of internal reproducibility. Results marked "<" are situated in the interval of the limit of detection and the limit of quantification and are not quantified.

Results marked "n.d." are lower than the limit of detection.

"Lowerbound" and "Upperbound" are levels defined in Directive 2002/69/EC and 2002/70/EC.