



The Business of Science **CHEMEX**

METALS ANALYSIS

Client: **CHEMEX**
Project Code **DEMO**
Project No: **08XA15A**
Matrix: **WATER AND SOIL**

CORPORATE CLASS / STANDARD

Quote No: **XK080101**
Order No: -
Client Project Code: -

FOR THE ATTENTION OF

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21st October 2008

CHEMEX CORPORATE CLASS ANALYTICAL PACKAGE

REPORT CONTENTS

INTRODUCTION

TABLE OF SAMPLES ANALYSED

PROJECT NOTES

ANALYTICAL METHODS

SAMPLE DATA AND BLANK DATA

CHEMEX CORPORATE CLASS ANALYTICAL PACKAGE

INTRODUCTION

Chemex certifies that the samples listed in this report have been analysed in accordance with the terms of the contract applicable and unless otherwise stated according to the standard method protocols quoted. Data presented is only representative of the samples reported within this report. No guarantees are given that this data is representative of the whole or any other part of the site from which the samples originated.

The Chemex Corporate Class package features a comprehensive quality control programme which provides essential internal monitoring of laboratory performance. Full details of the analytical methods used in these analyses can be provided if requested.

No undertaking is given that the Chemex analytical protocols applied accord in every detail with any single published method. The laboratory's use of the method as requested by the client should not be assumed to be evidence of the applicability of the method for any particular sample or determination.

MCERTS and ISO 17025

The accreditation status of all determinands is identified in the detection limit section of this report. Please also refer to www.ukas.org for our current UKAS and MCERTS accreditation status. Whilst we hold MCERTS accreditation for sand, loam and clay, or any material where these constitute the major part of the sample, other materials would require additional validation and quality control to satisfy the MCERTS Standard.

Any opinions or interpretations expressed in this report are outside the scope of the MCERTS Standard and ISO 17025 accreditation.

Unless otherwise stated, the data for all soil samples is expressed as the dry weight concentration and samples are analysed on an 'as submitted' basis. Sample data for all matrices is presented without correction for recovery unless indicated.

In addition to our own laboratory control samples (LCS), samples will be analysed as duplicates, matrix spikes and matrix spike duplicates upon request.

Any data failing to comply with the MCERTS Standard will be flagged or identified in the Project Notes. Occasionally, the nature of samples will result in data being generated that fails to satisfy the requirements of the MCERTS Standard. Moreover, under certain circumstances, the level of analytes present or the sample matrix may make it necessary to adopt modified procedures. Full details of such changes and the subsequent effect upon accreditation status will be recorded in the Project Notes.

The information and data reported here, which represent fully checked analytical results for samples as received by Chemex, supersede any preliminary results previously supplied, and in the case of any discrepancy the content of this report should be taken as definitive. Any queries arising from the content of this report should be addressed to the Chemex Business Development Group:

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METALS ANALYSIS

Client:	CHEMEX		
Project Code:	DEMO	Project No:	08XA15

Sample Receipt Date:	Time:	SDG:
31 JANUARY 2008	09:15	A

TABLE OF SAMPLES ANALYSED

Sampling Date / Time:	Client ID:	Bottle No:	Lab ID:	Matrix:
29-Jan-08 09:30	BH1	46467	08XA15A01G	WATER
29-Jan-08 10:10	BH2	46472	08XA15A02G	WATER
30-Jan-08 12:30	BH1 8.0m	27467	08XA15A03G	LOAM

METALS ANALYSIS

Client:	CHEMEX		
Project Code:	DEMO	Project No	08XA15
Sample Matrix:	WATER AND SOIL		

Sample Receipt Date:	Time:	SDG:
31 JANUARY 2008	09:15	A

PROJECT NOTES

Preliminary data for this project were issued on 13 February 2008.

The samples arrived at Chemex at 4.2 °C.

ANALYTICAL METHODS

The standard protocols employed for the analysis of environmental samples for metals by acid digestion and Inductively Coupled Plasma - Mass Spectrometry (ICP-MS) and Cold Vapour - Atomic Fluorescence Spectrometry (CV-AFS) are summarised here.

Under certain circumstances, the concentration of the analytes present or the nature of the sample matrix may make it necessary to adopt modified procedures to those described. Full details of any such change will be recorded in the Project Notes section. In this context, it should be noted that it may not be possible to achieve quality control criteria for all samples examined.

CHEMEX CORPORATE CLASS ANALYTICAL PACKAGE

SUMMARY OF ANALYTICAL PROCEDURES

The Chemex methods have been derived from the USEPA methods SW-846 6020 (Sep 1994) and 1631B (Jun 1999). The Chemex methods do not accord in every detail with the US EPA method.

Sample preparation: MET/W/10.4, MET/W/11.1, MET/W/12.1, MET/S/10.4, MET/S/11.1, MET/S/12.1

Samples for metals analysis are subjected to oxidative/acid digestion according to the particular metals to be analysed. All digestions are related to a corresponding method blank extraction, which is carried out to confirm the absence of contamination introduced during handling within the laboratory. Digests awaiting analysis are stored in polyethylene containers at $4^{\circ}\pm 2^{\circ}\text{C}$.

Sample analysis: MET/ICPMS/1.0, MET/AF/1.0

The aqueous digests from above are analysed using computer controlled techniques including ICP-MS and AFS according to the metals to be analysed. Target metals are quantified by reference to a calibration standard previously run within the same analytical period on that instrument.

Data processing is carried out using automated routines and the results obtained are then subjected to a series of manual checks in order to confirm the validity of the automated assignments.

Details of any significant deviation from the general procedure outlined above will be recorded in the Project Notes.

POINTS TO NOTE IN THE INTERPRETATION OF ANALYTICAL RESULTS

- Data for all samples are presented without correction for the levels of any metals detected in the corresponding method blank.
- Soil samples are air dried at 30°C over night, crushed and sieved through the 250µm sieve before taking an aliquot for digestion. The digestion of sample on 'as submitted' basis is carried out only when requested by the client.
- Data for soils and similar solid samples are calculated on the basis of dry weight (drying temperature 105°C) according to the SOP 1190.

$$\text{dry weight concentration} = \frac{\text{wet weight concentration} \times 100}{(100 - \% \text{ moisture})}$$

- In the case of samples which contain a relatively high concentration of metals, it may be necessary to deviate from the standard protocol by adjusting the amount of sample taken for analysis, or the volume of the digested sample solution prior to instrumental analysis. This is done to optimise the concentration of the analytes in solution with respect to the calibration range of the instrument.
- The effect of a dilution of this kind is to raise the detection limit of the analysis and also to enhance the apparent background level of any traces of target metals. In order to be able to make a valid comparison of the sample data with blank concentrations, and with the appropriate detection limits/quantitation limits, a scaling factor must be calculated as follows:

$$\text{scaling factor} = \frac{\text{actual digest volume}}{\text{protocol digest volume}} \times \frac{\text{protocol amount of sample}}{\text{actual amount of sample taken}}$$

Note: Protocol volumes are those presented on the corresponding blank data sheets.

The scaling factor should be used as follows:

$$\text{applicable blank} = \text{protocol blank result} \times \text{scaling factor}$$

$$\text{applicable limit} = \text{protocol limit} \times \text{scaling factor}$$

- It should be noted that the detection and quantitation limits have been scaled and are presented adjacent to each compound on the data sheets.
- In the case that the instrument detection limit (IDL) exceeds the detection limit (MDL), or other appropriate QC limit, then the value of the IDL will be used for the purpose of any QA/QC calculations.
- Due to their different calibration protocols the numbers of sets of calibration verification data for ICP-MS and AFS analyses may not be equal.
- Spurious contributions of zinc to method blanks are difficult to eliminate. Under ideal conditions very low background levels are achievable with consequent impressive MDLs and QLs as tabulated in this report. However, it is not uncommon to detect zinc concentrations above these ideal values.

POINTS TO NOTE IN THE INTERPRETATION OF ANALYTICAL RESULTS (Continued)

- Due to the addition of acid preservative to water samples to enable extended storage times to be utilised any particulate or suspended solids in the sample will have a tendency to have been leached. This will increase the apparent concentration of metals in the aqueous phase. This possible effect should be taken into consideration when evaluating data derived from water samples with particulate or suspended solids.
- The standard digestion method used for soils and sediment (and waters) is based upon US EPA methods for determining total metals. It must be pointed out however that this is not a true totals digestion since a number of rock types (principally silicates) are not broken down by the acid treatment used. Hydrofluoric acid digestion is typically used when these silicates require complete dissolution.
- In cases where the water samples provided contain significant quantities of sediment, the sample is decanted and the sediment not included in the extraction process. When any trace quantities of sediment are present in the water sample the sediment will be included in the extraction process.
- The US EPA recommended temperature range for sample storage is $4 \pm 2^{\circ}\text{C}$.

SAMPLE DATA AND BLANK DATA

Quantitation data is provided for each sample with details of any dilutions.

The results are expressed as concentrations in the sample provided, having taken into account any dilutions, weights or volumes taken and percent moisture as applicable.

Metals Analysis Sample Data Sheet

This form tabulates from left to right the concentration of target analytes in the sample digest solutions, the scaled detection limit equivalents in the sample, the scaled method quantitation limit equivalents in the sample and the scaled analyte concentrations in the sample. If an analyte is not detected a zero will be entered in the digest concentration and the sample equivalent concentration columns. Concentrations less than the scaled method quantitation limits should be treated with caution. **NB** The quantitation limits will vary if the amount of sample analysed differs from the standard protocol amount.

Three flags may appear next to the scaled sample concentrations for each analyte. These should be interpreted as follows:-

U Indicates that the analyte was not detected at a concentration greater than the scaled detection limit.

Metals Analysis Blank Data Sheet

This form tabulates the concentrations of target analytes found in preparation blanks in the same format as the Sample Data Sheet. The samples with which each blank is associated is indicated on the analysis worksheets at the end of the report.

METALS ANALYSIS

TARGET ANALYTE DETECTION AND QUANTITATION LIMITS

Analysis by ICP-MS:	WATER/ EFFLUENT			SOIL		
	MDL µg/L	QL µg/L	Accreditation Status	MDL mg/Kg	QL mg/Kg	Accreditation Status
Aluminium	20	100	U	20	100	
Antimony	0.5	2.5	U	0.5	2.5	
Arsenic	2	10	U	2	10	UM
Barium	1	5	U	1	5	UM
Beryllium	0.5	2.5	U	0.5	2.5	UM
Bismuth	1	5	U	1	5	U
Boron	3	15	U	3	15	U
Cadmium	0.25	1.25	U	0.25	1.25	UM
Calcium	200	1000	U	200	1000	U
Chromium	2	10	U	2	10	UM
Cobalt	2	10	U	2	10	U
Copper	2	10	U	2	10	UM
Gallium	1	5	U	1	5	U
Indium	1	5	U	1	5	U
Iron	15	75	U	15	75	
Lead	0.5	2.5	U	0.5	2.5	UM
Magnesium	200	1000	U	200	1000	U
Manganese	2	10	U	2	10	U
Molybdenum	1	5	U	1	5	UM
Nickel	2	10	U	2	10	UM
Potassium	200	1000	U	200	1000	U
Selenium	1.0	5.0	U	1.0	5.0	UM
Strontium	5	25	U	5	25	U
Silver	1	5		1	5	
Sodium	200	1000	U	200	1000	U
Thallium	0.5	2.5	U	0.5	2.5	UM
Tin	2	10	U	1	5	
Titanium	10	50	U	2	10	U
Vanadium	5	25	U	1	5	UM
Zinc	5	25	U	5	25	UM

Analysis by AFS:						
Mercury	0.06	0.30	U	0.12	0.6	UM

Key: **QL** = Quantitation Limit
MDL = Method Detection Limit
U = UKAS accredited to ISO 17025
M = MCERTS accredited

Date revised: June 2008

Project No: 08XA15A Project Code: - DEMO Class: -

Lab sample ID:	BLANK 915 / 916	08XA15A01G	08XA15A02G
Client ID:	-	BH1	BH2
Bottle No:	-	46467	46472
Matrix:	WATER	WATER	WATER
Volume/Weight:	36	36	36
% Moisture:	-	-	-

Units: ug/l

Analyte (method)

Aluminium (M)	< 20.0	< 20.0	45.9
Antimony (M)	< 0.50	< 0.50	0.64
Arsenic (M)	< 2.00	< 2.00	< 2.00
Barium (M)	< 1.00	1.42	1.59
Beryllium (M)	< 0.50	< 0.50	< 0.50
Bismuth (M)	< 1.00	< 1.00	< 1.00
Boron (M)	9.55	178	1090
Cadmium (M)	< 0.25	0.46	1.20
Calcium (M)	< 200	< 200	523
Chromium (M)	< 2.00	2.86	39.7
Cobalt (M)	< 2.00	< 2.00	3.37
Copper (M)	< 2.00	12.0	12.7
Gallium (M)	< 1.00	< 1.00	< 1.00
Indium (M)	< 1.00	< 1.00	< 1.00
Iron (M)	< 15.0	20.8	157
Lead (M)	0.64	2.69	5.55
Magnesium (M)	< 200	< 200	< 200
Manganese (M)	< 2.00	< 2.00	5.82
Mercury (F)	< 0.06	< 0.06	0.50
Molybdenum (M)	< 1.00	11.6	29.8
Nickel (M)	< 2.00	9.32	214
Potassium (M)	< 200	< 200	44300
Selenium (M)	< 1.00	< 1.00	< 1.00
Silver (M)	< 1.00	< 1.00	< 1.00
Sodium (M)	< 200	< 200	364000
Strontium (M)	< 5.00	< 5.00	< 5.00
Thallium (M)	< 0.50	1.83	< 0.50
Tin (M)	5.33	2.88	7.88
Titanium (M)	< 10.0	< 10.0	23.6
Vanadium (M)	< 5.00	< 5.00	< 5.00
Zinc (M)	6.28	17.2	8.50

Analysis by: (M) ICPMS, (F) CVAFS.

* Rounding : Values >=1.00 to 3 s.f., values <1.00 to 2 dec. pl., trailing zeros not shown.

SF Scaling Factors

Project No: 08XA15A Project Code: - DEMO Class: -

Lab sample ID: BLANK 914 08XA15A03G
Client ID: - BH1 8.0 m
Bottle No: - 27467
Matrix: SOIL SOIL
Volume/Weight: 0.5 0.499
% Moisture: 0 3.2

Units: mg/kg dry

Analyte (method)

Aluminium (M)	< 20.0	180000
Antimony (M)	< 0.50	0.50
Arsenic (M)	< 2.00	30.1
Barium (M)	< 1.00	2010
Beryllium (M)	< 0.50	3.24
Bismuth (M)	< 1.00	1.83
Boron (M)	< 3.00	28.1
Cadmium (M)	< 0.25	0.33
Calcium (M)	< 200	10700
Chromium (M)	< 2.00	385
Cobalt (M)	< 2.00	34.9
Copper (M)	< 2.00	74.2
Gallium (M)	< 1.00	133
Indium (M)	< 1.00	1.00
Iron (M)	< 15.0	321000
Lead (M)	< 0.50	111
Magnesium (M)	< 200	3490
Manganese (M)	< 2.00	967
Mercury (F)	< 0.10	0.28
Molybdenum (M)	< 1.00	6.01
Nickel (M)	< 2.00	137
Potassium (M)	< 200	9550
Selenium (M)	< 1.00	3.65
Silver (M)	< 1.00	1.00
Sodium (M)	< 200	1340
Strontium (M)	< 5.00	375
Thallium (M)	< 0.50	4.46
Tin (M)	< 1.00	1.86
Titanium (M)	< 2.00	981
Vanadium (M)	< 1.00	187
Zinc (M)	< 5.00	96.4

Analysis by: (M) ICPMS, (F) CVAFS.

* Rounding : Values ≥ 1.00 to 3 s.f., values < 1.00 to 2 dec. pl., trailing zeros not shown.

SF Scaling Factors

METALS ANALYSIS
BLANK SAMPLE DATA

Client:	Chemex	Project No:	08XA15A	Project Code:	DEMO
Bottle No:	-	Client ID:	-	Lab ID:	BLANK 915 / 916
Matrix:	WATER	% Moisture:	-		
Date Received:	n/a				
Date Digested:	28-Mar-2008	Volume (ml):	36	Digest Final Vol (ml):	40
Mercury Prepared:	27-Mar-2008	Volume (ml):	25	Preparation Final Vol (ml):	50

Element	Digest ug/l	SF	Final Vol ml	MDL ug/l	QL ug/l	Sample ug/l	C
Aluminium (M)	0.00	1.00	200	20.00	100.00	0.00	U
Antimony (M)	0.01	1.00	200	0.50	2.50	0.05	U
Arsenic (M)	0.00	1.00	200	2.00	10.00	0.00	U
Barium (M)	0.10	1.00	200	1.00	5.00	0.54	U
Beryllium (M)	0.00	1.00	200	0.50	2.50	0.01	U
Bismuth (M)	0.00	1.00	200	1.00	5.00	0.02	U
Boron (M)	1.72	1.00	200	3.00	15.00	9.55	
Cadmium (M)	0.01	1.00	200	0.25	1.25	0.08	U
Calcium (M)	17.00	1.00	200	200.00	1000.00	94.42	U
Chromium (M)	0.19	1.00	200	2.00	10.00	1.05	U
Cobalt (M)	0.00	1.00	200	2.00	10.00	0.01	U
Copper (M)	0.27	1.00	200	2.00	10.00	1.50	U
Gallium (M)	0.02	1.00	200	1.00	5.00	0.08	U
Indium (M)	0.01	1.00	200	1.00	5.00	0.08	U
Iron (M)	0.60	1.00	200	15.00	75.00	3.36	U
Lead (M)	0.12	1.00	200	0.50	2.50	0.64	
Magnesium (M)	0.00	1.00	200	200.00	1000.00	0.00	U
Manganese (M)	0.09	1.00	200	2.00	10.00	0.52	U
Mercury (F)	0.00	1.00	50	0.06	0.30	0.00	U
Molybdenum (M)	0.13	1.00	200	1.00	5.00	0.73	U
Nickel (M)	0.01	1.00	200	2.00	10.00	0.04	U
Potassium (M)	4.36	1.00	200	200.00	1000.00	24.19	U
Selenium (M)	0.00	1.00	200	1.00	5.00	0.00	U
Silver (M)	0.04	1.00	200	1.00	5.00	0.22	U
Sodium (M)	0.00	1.00	200	200.00	1000.00	0.00	U
Strontium (M)	0.08	1.00	200	5.00	25.00	0.42	U
Thallium (M)	0.03	1.00	200	0.50	2.50	0.15	U
Tin (M)	0.96	1.00	200	2.00	10.00	5.33	
Titanium (M)	0.14	1.00	200	10.00	50.00	0.80	U
Vanadium (M)	0.00	1.00	200	5.00	25.00	0.00	U
Zinc (M)	1.13	1.00	200	5.00	25.00	6.28	

METALS ANALYSIS
SAMPLE DATA

Client:	Chemex	Project No:	08XA15A	Project Code:	DEMO
Bottle No:	46467	Client ID:	BH1	Lab ID:	08XA15A01G
Matrix:	WATER	% Moisture:	-		
Date Received:	31-Jan-2008				
Date Digested:	28-Mar-2008	Volume (ml):	36	Digest Final Vol (ml):	40
Mercury Prepared:	27-Mar-2008	Volume (ml):	25	Preparation Final Vol (ml):	50

Element	Digest ug/l	SF	Final Vol ml	MDL ug/l	QL ug/l	Sample ug/l	C
Aluminium (M)	0.00	1.00	200	20.00	100.00	0.00	U
Antimony (M)	0.05	1.00	200	0.50	2.50	0.27	U
Arsenic (M)	0.00	1.00	200	2.00	10.00	0.01	U
Barium (M)	0.26	1.00	200	1.00	5.00	1.42	
Beryllium (M)	0.02	1.00	200	0.50	2.50	0.09	U
Bismuth (M)	0.05	1.00	200	1.00	5.00	0.29	U
Boron (M)	32.03	1.00	200	3.00	15.00	177.96	
Cadmium (M)	0.08	1.00	200	0.25	1.25	0.46	
Calcium (M)	25.55	1.00	200	200.00	1000.00	141.92	U
Chromium (M)	0.51	1.00	200	2.00	10.00	2.86	
Cobalt (M)	0.15	1.00	200	2.00	10.00	0.86	U
Copper (M)	2.16	1.00	200	2.00	10.00	11.98	
Gallium (M)	0.08	1.00	200	1.00	5.00	0.46	U
Indium (M)	0.06	1.00	200	1.00	5.00	0.31	U
Iron (M)	3.75	1.00	200	15.00	75.00	20.82	
Lead (M)	0.48	1.00	200	0.50	2.50	2.69	
Magnesium (M)	5.34	1.00	200	200.00	1000.00	29.64	U
Manganese (M)	0.17	1.00	200	2.00	10.00	0.97	U
Mercury (F)	0.00	1.00	50	0.06	0.30	0.00	U
Molybdenum (M)	2.08	1.00	200	1.00	5.00	11.58	
Nickel (M)	1.68	1.00	200	2.00	10.00	9.32	
Potassium (M)	8.95	1.00	200	200.00	1000.00	49.69	U
Selenium (M)	0.04	1.00	200	1.00	5.00	0.21	U
Silver (M)	0.12	1.00	200	1.00	5.00	0.69	U
Sodium (M)	0.00	1.00	200	200.00	1000.00	0.00	U
Strontium (M)	0.20	1.00	200	5.00	25.00	1.14	U
Thallium (M)	0.33	1.00	200	0.50	2.50	1.83	
Tin (M)	0.52	1.00	200	2.00	10.00	2.88	
Titanium (M)	0.21	1.00	200	10.00	50.00	1.17	U
Vanadium (M)	0.51	1.00	200	5.00	25.00	2.83	U
Zinc (M)	3.10	1.00	200	5.00	25.00	17.21	

METALS ANALYSIS
SAMPLE DATA

Client:	Chemex	Project No:	08XA15A	Project Code:	DEMO
Bottle No:	46472	Client ID:	BH2	Lab ID:	08XA15A02G
Matrix:	WATER	% Moisture:	-		
Date Received:	31-Jan-2008				
Date Digested:	28-Mar-2008	Volume (ml):	36	Digest Final Vol (ml):	40
Mercury Prepared:	27-Mar-2008	Volume (ml):	25	Preparation Final Vol (ml):	50

Element	Digest ug/l	SF	Final Vol ml	MDL ug/l	QL ug/l	Sample ug/l	C
Aluminium (M)	8.27	1.00	200	20.00	100.00	45.92	
Antimony (M)	0.12	1.00	200	0.50	2.50	0.64	
Arsenic (M)	0.01	1.00	200	2.00	10.00	0.08	U
Barium (M)	0.29	1.00	200	1.00	5.00	1.59	
Beryllium (M)	0.00	1.00	200	0.50	2.50	0.01	U
Bismuth (M)	0.00	1.00	200	1.00	5.00	0.00	U
Boron (M)	195.72	1.00	200	3.00	15.00	1087.34	
Cadmium (M)	0.22	1.00	200	0.25	1.25	1.20	
Calcium (M)	94.15	1.00	200	200.00	1000.00	523.03	
Chromium (M)	7.15	1.00	200	2.00	10.00	39.73	
Cobalt (M)	0.61	1.00	200	2.00	10.00	3.37	
Copper (M)	2.28	1.00	200	2.00	10.00	12.69	
Gallium (M)	0.04	1.00	200	1.00	5.00	0.23	U
Indium (M)	0.00	1.00	200	1.00	5.00	0.00	U
Iron (M)	28.29	1.00	200	15.00	75.00	157.16	
Lead (M)	1.00	1.00	200	0.50	2.50	5.55	
Magnesium (M)	14.23	1.00	200	200.00	1000.00	79.03	U
Manganese (M)	1.05	1.00	200	2.00	10.00	5.82	
Mercury (F)	0.25	1.00	50	0.06	0.30	0.50	
Molybdenum (M)	5.36	1.00	200	1.00	5.00	29.79	
Nickel (M)	38.54	1.00	200	2.00	10.00	214.12	
Potassium (M)	7974.03	1.00	200	200.00	1000.00	44300.14	
Selenium (M)	0.00	1.00	200	1.00	5.00	0.02	U
Silver (M)	0.04	1.00	200	1.00	5.00	0.20	U
Sodium (M)	65506.69	1.00	200	200.00	1000.00	363926.03	
Strontium (M)	0.30	1.00	200	5.00	25.00	1.65	U
Thallium (M)	0.04	1.00	200	0.50	2.50	0.24	U
Tin (M)	1.42	1.00	200	2.00	10.00	7.88	
Titanium (M)	4.25	1.00	200	10.00	50.00	23.63	
Vanadium (M)	0.77	1.00	200	5.00	25.00	4.29	U
Zinc (M)	1.53	1.00	200	5.00	25.00	8.50	

METALS ANALYSIS
BLANK SAMPLE DATA

Client:	Chemex	Project No:	08XA15A	Project Code:	DEMO
Bottle No:	-	Client ID:	-	Lab ID:	BLANK 914
Matrix:	SOIL	% Moisture:	0		
Date Received:	n/a				
Date Digested:	27-Mar-2008	Weight (g):	0.5	Digest Final Vol (ml):	50
Mercury Prepared:	27-Mar-2008	Weight (g):	0.5	Preparation Final Vol (ml):	1250

Element	Digest ug/l	SF	Final Vol ml	MDL mg/kg dry	QL mg/kg dry	Sample mg/kg dry	C
Aluminium (M)	0.00	1.00	500	20.00	100.00	0.00	U
Antimony (M)	0.00	1.00	500	0.50	2.50	0.00	U
Arsenic (M)	0.00	1.00	500	2.00	10.00	0.00	U
Barium (M)	0.00	1.00	500	1.00	5.00	0.00	U
Beryllium (M)	0.00	1.00	500	0.50	2.50	0.00	U
Bismuth (M)	0.01	1.00	500	1.00	5.00	0.01	U
Boron (M)	0.00	1.00	500	3.00	15.00	0.00	U
Cadmium (M)	0.02	1.00	500	0.25	1.25	0.02	U
Calcium (M)	0.00	1.00	500	200.00	1000.00	0.00	U
Chromium (M)	0.00	1.00	500	2.00	10.00	0.00	U
Cobalt (M)	0.01	1.00	500	2.00	10.00	0.01	U
Copper (M)	0.16	1.00	500	2.00	10.00	0.16	U
Gallium (M)	0.00	1.00	500	1.00	5.00	0.00	U
Indium (M)	0.01	1.00	500	1.00	5.00	0.01	U
Iron (M)	0.00	1.00	500	15.00	75.00	0.00	U
Lead (M)	0.05	1.00	500	0.50	2.50	0.05	U
Magnesium (M)	0.00	1.00	500	200.00	1000.00	0.00	U
Manganese (M)	0.00	1.00	500	2.00	10.00	0.00	U
Mercury (F)	0.00	1.00	1250	0.10	0.50	0.00	U
Molybdenum (M)	0.17	1.00	500	1.00	5.00	0.17	U
Nickel (M)	0.00	1.00	500	2.00	10.00	0.00	U
Potassium (M)	0.00	1.00	500	200.00	1000.00	0.00	U
Selenium (M)	0.00	1.00	500	1.00	5.00	0.00	U
Silver (M)	0.04	1.00	500	1.00	5.00	0.04	U
Sodium (M)	13.59	1.00	500	200.00	1000.00	13.59	U
Strontium (M)	0.25	1.00	500	5.00	25.00	0.25	U
Thallium (M)	0.06	1.00	500	0.50	2.50	0.06	U
Tin (M)	0.04	1.00	500	1.00	5.00	0.04	U
Titanium (M)	0.00	1.00	500	2.00	10.00	0.00	U
Vanadium (M)	0.00	1.00	500	1.00	5.00	0.00	U
Zinc (M)	0.08	1.00	500	5.00	25.00	0.08	U

METALS ANALYSIS
SAMPLE DATA

Client:	Chemex	Project No:	08XA15A	Project Code:	DEMO
Bottle No:	27467	Client ID:	BH1 8.0 m	Lab ID:	08XA15A03G
Matrix:	SOIL	% Moisture:	3.2		
Date Received:	31-Jan-2008				
Date Digested:	27-Mar-2008	Weight (g):	0.499	Digest Final Vol (ml):	50
Mercury Prepared:	27-Mar-2008	Weight (g):	0.499	Preparation Final Vol (ml):	1250

Element	Digest ug/l	SF	Final Vol ml	MDL mg/kg dry	QL mg/kg dry	Sample mg/kg dry	C
Aluminium (M)	179683.75	1.00	500	20.04	100.20	180043.84	
Antimony (M)	0.41	1.00	500	0.50	2.51	0.41	
Arsenic (M)	30.07	1.00	500	2.00	10.02	30.13	
Barium (M)	2001.75	1.00	500	1.00	5.01	2005.76	
Beryllium (M)	3.23	1.00	500	0.50	2.51	3.24	
Bismuth (M)	1.83	1.00	500	1.00	5.01	1.83	
Boron (M)	28.01	1.00	500	3.01	15.03	28.06	
Cadmium (M)	0.32	1.00	500	0.25	1.25	0.33	
Calcium (M)	10723.96	1.00	500	200.40	1002.00	10745.45	
Chromium (M)	383.94	1.00	500	2.00	10.02	384.71	
Cobalt (M)	34.83	1.00	500	2.00	10.02	34.90	
Copper (M)	74.07	1.00	500	2.00	10.02	74.22	
Gallium (M)	132.44	1.00	500	1.00	5.01	132.71	
Indium (M)	0.54	1.00	500	1.00	5.01	0.54	
Iron (M)	320180.55	1.00	500	15.03	75.15	320822.19	
Lead (M)	111.15	1.00	500	0.50	2.51	111.37	
Magnesium (M)	3485.63	1.00	500	200.40	1002.00	3492.62	
Manganese (M)	965.54	1.00	500	2.00	10.02	967.47	
Mercury (F)	0.11	1.00	1250	0.10	0.50	0.28	
Molybdenum (M)	6.00	1.00	500	1.00	5.01	6.01	
Nickel (M)	136.85	1.00	500	2.00	10.02	137.12	
Potassium (M)	9533.35	1.00	500	200.40	1002.00	9552.45	
Selenium (M)	3.65	1.00	500	1.00	5.01	3.65	
Silver (M)	0.58	1.00	500	1.00	5.01	0.58	
Sodium (M)	1336.99	1.00	500	200.40	1002.00	1339.67	
Strontium (M)	374.04	1.00	500	5.01	25.05	374.79	
Thallium (M)	4.45	1.00	500	0.50	2.51	4.46	
Tin (M)	1.86	1.00	500	1.00	5.01	1.86	
Titanium (M)	978.80	1.00	500	2.00	10.02	980.76	
Vanadium (M)	186.17	1.00	500	1.00	5.01	186.54	
Zinc (M)	96.24	1.00	500	5.01	25.05	96.43	