



LABORATORY REPORT

Prepared For: Geosyntec Consultants/Project Navigator - Ascon
2100 Main Street, Suite 150
Huntington Beach, CA 92648
Attention: Mike Reardon

Project: SB0202/31D

Sampled: 07/06/04
Received: 07/07/04
Issued: 07/14/04 15:27

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

LABORATORY ID

ING0239-01

CLIENT ID

PNL-L4A

MATRIX

Soil

Reviewed By:

Del Mar Analytical, Irvine
Kathleen A. Robb
Project Manager



Geosyntec Consultants/Project Navigator - Ascon
 2100 Main Street, Suite 150
 Huntington Beach, CA 92648
 Attention: Mike Reardon

Project ID: SB0202/31D

Report Number: ING0239

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METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ING0239-01 (PNL-L4A - Soil)								
Reporting Units: mg/kg								
Antimony	EPA 6010B	4G10045	10	ND	1	7/10/2004	7/12/2004	
Arsenic	EPA 6010B	4G10045	2.0	26	1	7/10/2004	7/12/2004	
Barium	EPA 6010B	4G10045	1.0	1800	1	7/10/2004	7/12/2004	
Beryllium	EPA 6010B	4G10045	0.50	ND	1	7/10/2004	7/12/2004	
Cadmium	EPA 6010B	4G10045	0.50	1.8	1	7/10/2004	7/12/2004	
Chromium	EPA 6010B	4G10045	1.0	110	1	7/10/2004	7/12/2004	
Cobalt	EPA 6010B	4G10045	1.0	3.1	1	7/10/2004	7/12/2004	
Copper	EPA 6010B	4G10045	2.0	23	1	7/10/2004	7/12/2004	
Lead	EPA 6010B	4G10045	2.0	57	1	7/10/2004	7/12/2004	
Mercury	EPA 7471A	4G13082	0.020	0.12	1	7/13/2004	7/13/2004	
Molybdenum	EPA 6010B	4G10045	2.0	ND	1	7/10/2004	7/12/2004	
Nickel	EPA 6010B	4G10045	2.0	25	1	7/10/2004	7/12/2004	
Selenium	EPA 6010B	4G10045	2.0	3.3	1	7/10/2004	7/12/2004	
Silver	EPA 6010B	4G10045	1.0	1.1	1	7/10/2004	7/12/2004	
Thallium	EPA 6010B	4G10045	10	ND	1	7/10/2004	7/12/2004	
Vanadium	EPA 6010B	4G10045	1.0	29	1	7/10/2004	7/12/2004	
Zinc	EPA 6010B	4G10045	5.0	170	1	7/10/2004	7/12/2004	

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TCLP METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	TCLP Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ING0239-01 (PNL-L4A - Soil)									
Reporting Units: mg/l									
Arsenic	6010B-TCLP	4G09077	0.20	0.31	1	5.0	7/9/2004	7/9/2004	
Barium	6010B-TCLP	4G09077	0.20	1.8	1	100.0	7/9/2004	7/9/2004	
Chromium	6010B-TCLP	4G09077	0.10	0.12	1	5.0	7/9/2004	7/9/2004	
Lead	6010B-TCLP	4G09077	0.10	ND	1	5.0	7/9/2004	7/9/2004	

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STLC METALS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	STLC Limit	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: ING0239-01 (PNL-L4A - Soil) - cont.									
Reporting Units: mg/l									
Arsenic	6010B-STLC	4G12052	0.10	0.86	1	5.0	7/12/2004	7/12/2004	
Barium	6010B-STLC	4G12052	0.20	16	1	100	7/12/2004	7/12/2004	
Chromium	6010B-STLC	4G12052	0.10	1.6	1	5.0	7/12/2004	7/12/2004	
Lead	6010B-STLC	4G12052	0.10	0.56	1	5.0	7/12/2004	7/12/2004	

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WASTE EXTRACTION TEST (STLC) - Metals/Inorganics

Analyte	Method	Batch	Extraction Start Date	Extraction End Date	Data Qualifiers
Sample ID: ING0239-01 (PNL-L4A - Soil) Extraction	STLC-Met	4G08108	7/8/2004	7/10/2004	

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TCLP EXTRACTION - Metals

Analyte	Method	Batch	Extraction Start Date	Extraction End Date	Data Qualifiers
Sample ID: ING0239-01 (PNL-L4A - Soil) Extraction	EPA 1311-Met	4G08107	7/8/2004	7/9/2004	T6

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits RPD	RPD Limit	Data Qualifiers
Batch: 4G10045 Extracted: 07/10/04									
Blank Analyzed: 07/12/04 (4G10045-BLK1)									
Antimony	ND	10	mg/kg						
Arsenic	ND	2.0	mg/kg						
Barium	ND	1.0	mg/kg						
Beryllium	ND	0.50	mg/kg						
Cadmium	ND	0.50	mg/kg						
Chromium	ND	1.0	mg/kg						
Cobalt	ND	1.0	mg/kg						
Copper	ND	2.0	mg/kg						
Lead	ND	2.0	mg/kg						
Molybdenum	ND	2.0	mg/kg						
Nickel	ND	2.0	mg/kg						
Selenium	ND	2.0	mg/kg						
Silver	ND	1.0	mg/kg						
Thallium	ND	10	mg/kg						
Vanadium	ND	1.0	mg/kg						
Zinc	ND	5.0	mg/kg						
LCS Analyzed: 07/12/04 (4G10045-BS1)									
Antimony	49.1	10	mg/kg	50.0		98	80-120		
Arsenic	45.1	2.0	mg/kg	50.0		90	80-120		
Barium	47.4	1.0	mg/kg	50.0		95	80-120		
Beryllium	45.9	0.50	mg/kg	50.0		92	80-120		
Cadmium	46.4	0.50	mg/kg	50.0		93	80-120		
Chromium	46.5	1.0	mg/kg	50.0		93	80-120		
Cobalt	47.0	1.0	mg/kg	50.0		94	80-120		
Copper	45.1	2.0	mg/kg	50.0		90	80-120		
Lead	47.2	2.0	mg/kg	50.0		94	80-120		
Molybdenum	47.1	2.0	mg/kg	50.0		94	80-120		
Nickel	45.9	2.0	mg/kg	50.0		92	80-120		
Selenium	45.3	2.0	mg/kg	50.0		91	80-120		
Silver	23.1	1.0	mg/kg	25.0		92	80-120		
Thallium	46.8	10	mg/kg	50.0		94	80-120		
Vanadium	48.2	1.0	mg/kg	50.0		96	80-120		
Zinc	46.2	5.0	mg/kg	50.0		92	80-120		

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METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4G10045 Extracted: 07/10/04										
Matrix Spike Analyzed: 07/12/04 (4G10045-MS1)					Source: ING0189-04					
Antimony	30.0	10	mg/kg	50.0	ND	60	75-125			M2
Arsenic	47.6	2.0	mg/kg	50.0	1.4	92	75-125			
Barium	79.8	1.0	mg/kg	50.0	33	94	75-125			
Beryllium	47.7	0.50	mg/kg	50.0	0.23	95	75-125			
Cadmium	47.4	0.50	mg/kg	50.0	0.26	94	75-125			
Chromium	54.4	1.0	mg/kg	50.0	7.6	94	75-125			
Cobalt	51.8	1.0	mg/kg	50.0	5.6	92	75-125			
Copper	69.8	2.0	mg/kg	50.0	18	104	75-125			
Lead	50.8	2.0	mg/kg	50.0	2.6	96	75-125			
Molybdenum	48.0	2.0	mg/kg	50.0	0.74	95	75-125			
Nickel	51.0	2.0	mg/kg	50.0	5.6	91	75-125			
Selenium	47.6	2.0	mg/kg	50.0	1.4	92	75-125			
Silver	24.0	1.0	mg/kg	25.0	1.5	90	75-125			
Thallium	47.6	10	mg/kg	50.0	ND	95	75-125			
Vanadium	69.5	1.0	mg/kg	50.0	22	95	75-125			
Zinc	80.0	5.0	mg/kg	50.0	32	96	75-125			
Matrix Spike Dup Analyzed: 07/12/04 (4G10045-MSD1)					Source: ING0189-04					
Antimony	29.0	10	mg/kg	50.0	ND	58	75-125	3	20	M2
Arsenic	47.4	2.0	mg/kg	50.0	1.4	92	75-125	0	20	
Barium	80.5	1.0	mg/kg	50.0	33	95	75-125	1	20	
Beryllium	48.5	0.50	mg/kg	50.0	0.23	97	75-125	2	20	
Cadmium	47.6	0.50	mg/kg	50.0	0.26	95	75-125	0	20	
Chromium	56.0	1.0	mg/kg	50.0	7.6	97	75-125	3	20	
Cobalt	52.4	1.0	mg/kg	50.0	5.6	94	75-125	1	20	
Copper	72.3	2.0	mg/kg	50.0	18	109	75-125	4	20	
Lead	51.1	2.0	mg/kg	50.0	2.6	97	75-125	1	20	
Molybdenum	48.3	2.0	mg/kg	50.0	0.74	95	75-125	1	20	
Nickel	51.6	2.0	mg/kg	50.0	5.6	92	75-125	1	20	
Selenium	48.1	2.0	mg/kg	50.0	1.4	93	75-125	1	20	
Silver	24.2	1.0	mg/kg	25.0	1.5	91	75-125	1	20	
Thallium	48.2	10	mg/kg	50.0	ND	96	75-125	1	20	
Vanadium	74.6	1.0	mg/kg	50.0	22	105	75-125	7	20	
Zinc	81.4	5.0	mg/kg	50.0	32	99	75-125	2	20	

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METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4G13082 Extracted: 07/13/04										
Blank Analyzed: 07/13/04 (4G13082-BLK1)										
Mercury	ND	0.020	mg/kg							
LCS Analyzed: 07/13/04 (4G13082-BS1)										
Mercury	0.961	0.020	mg/kg	0.800		120	85-120			
Matrix Spike Analyzed: 07/13/04 (4G13082-MS1)										
					Source: ING0453-01					
Mercury	0.929	0.020	mg/kg	0.800	0.029	112	65-135			
Matrix Spike Dup Analyzed: 07/13/04 (4G13082-MSD1)										
					Source: ING0453-01					
Mercury	0.927	0.020	mg/kg	0.800	0.029	112	65-135	0	20	

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METHOD BLANK/QC DATA

TCLP METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits RPD	RPD Limit	Data Qualifiers
Batch: 4G09077 Extracted: 07/09/04									
Blank Analyzed: 07/09/04 (4G09077-BLK1)									
Arsenic	ND	0.20	mg/l						
Barium	ND	0.20	mg/l						
Chromium	ND	0.10	mg/l						
Lead	ND	0.10	mg/l						
LCS Analyzed: 07/09/04 (4G09077-BS1)									
Arsenic	1.83	0.20	mg/l	2.00		92	80-120		
Barium	1.83	0.20	mg/l	2.00		92	80-120		
Chromium	1.82	0.10	mg/l	2.00		91	80-120		
Lead	1.89	0.10	mg/l	2.00		94	80-120		
Matrix Spike Analyzed: 07/09/04 (4G09077-MS1)					Source: ING0297-01				
Arsenic	1.93	0.20	mg/l	2.00	ND	96	75-125		
Barium	2.04	0.20	mg/l	2.00	0.20	92	75-125		
Chromium	1.91	0.10	mg/l	2.00	0.049	93	75-125		
Lead	1.92	0.10	mg/l	2.00	ND	96	75-125		

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METHOD BLANK/QC DATA

STLC METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 4G12052 Extracted: 07/12/04										
Blank Analyzed: 07/12/04 (4G12052-BLK1)										
Arsenic	ND	0.10	mg/l							
Barium	ND	0.20	mg/l							
Chromium	ND	0.10	mg/l							
Lead	ND	0.10	mg/l							
LCS Analyzed: 07/12/04 (4G12052-BS1)										
Arsenic	20.0	0.10	mg/l	20.0		100	80-120			
Barium	19.8	0.20	mg/l	20.0		99	80-120			
Chromium	19.6	0.10	mg/l	20.0		98	80-120			
Lead	19.6	0.10	mg/l	20.0		98	80-120			
Matrix Spike Analyzed: 07/12/04 (4G12052-MS1) Source: INF1517-01										
Arsenic	20.0	0.10	mg/l	20.0	ND	100	75-125			
Barium	22.2	0.20	mg/l	20.0	3.9	92	75-125			
Chromium	19.8	0.10	mg/l	20.0	0.074	99	75-125			
Lead	19.4	0.10	mg/l	20.0	ND	97	75-125			
Matrix Spike Dup Analyzed: 07/12/04 (4G12052-MSD1) Source: INF1517-01										
Arsenic	20.0	0.10	mg/l	20.0	ND	100	75-125	0	20	
Barium	21.8	0.20	mg/l	20.0	3.9	89	75-125	2	20	
Chromium	19.8	0.10	mg/l	20.0	0.074	99	75-125	0	20	
Lead	19.5	0.10	mg/l	20.0	ND	98	75-125	1	20	

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DATA QUALIFIERS AND DEFINITIONS

- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- T6** The temperature during the 18 hour TCLP extraction exceeded the 21-25 degrees C range stated in EPA Method 1311. The temperature range during the extraction was 24-26 degrees C.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

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Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
6010B-STLC	Solid	X	X
6010B-TCLP	Soil	X	X
EPA 1311-Met	Solid	X	X
EPA 6010B	Soil	X	X
EPA 7471A	Soil	X	X
STLC-Met	Solid	X	X

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

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11/17/2002

CHAIN OF CUSTODY FORM

Client Name/Address: GeoSyntec 2100 Main St #150 HB, CA 92648		Project/PO Number: Ascon LF S80202/31D		Analysis Required													
Project Manager: Mike Reardon		Phone Number: (714) 969-0800		Analysis Required													
Sampler: Lauren Dage		Fax Number: (714) 969-0820		Analysis Required													
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives						Turnaround Time: (Check)		Special Instructions			
PML-LHA	Soil	glass	3	7-7-04	1145	N/A						same day	72 hours				
												24 hours	5 days				
												48 hours	normal		X		
												Sample Integrity: (Check)					
												intact	on ice		5°C		
Relinquished By: Lauren Dage		Date/Time: 7-7-04		Received by: Mike Reardon		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04	
Relinquished By: Lauren Dage		Date/Time: 7-7-04		Received by: Mike Reardon		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04	
Relinquished By: Lauren Dage		Date/Time: 7-7-04		Received by: Mike Reardon		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04		Date/Time: 7-7-04	

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

MR