

May 16, 2008

Derek Ingram  
Philip Environmental  
210 West Sand Bank Road  
Columbia, IL 62236-0230  
TEL: (618) 281-7173  
FAX: (618) 281-5120



**RE:** A831-735002-012901-225/IP Champaign 62403053

**WorkOrder:** 08050396

Dear Derek Ingram:

TEKLAB, INC received 1 sample on 4/16/2008 10:00:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. IL ELAP and NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Heather A. White".

Heather A. White  
Project Manager  
(618)344-1004 ex.20

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ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004

FAX: 618-344-1005

**Client:** Philip Environmental

## SAMPLE SUMMARY

**Project:** A831-735002-012901-225/IP Champaign 62403053

**Lab Order:** 08050396

**Report Date:** 16-May-08

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Lab Sample ID	Client Sample ID	Fractions	Collection Date
08050396-001	B-802 (8.5-10.0 ft)	1	4/15/2008 9:15:00 AM

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ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004

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**Client:** Philip Environmental

## CASE NARRATIVE

**Project:** A831-735002-012901-225/IP Champaign 62403053

**LabOrder:** 08050396

**Report Date:** 16-May-08

**Cooler Receipt Temp:** °C

### State accreditations:

KS: NELAP #E-10347 | KY: UST #0073 | MO: DNR #00930 | AR: ADEQ #70-028-0

Additional analysis requested on WO #08040620.

### Qualifiers

**DF** - Dilution Factor

**RL** - Reporting Limit

**ND** - Not Detected at the Reporting Limit

**Surr** - Surrogate Standard added by lab

**TNTC** - Too numerous to count (> 200 CFU)

**Q** - QC criteria failed or noncompliant CCV

**NELAP** - IL ELAP and NELAP Accredited Field of Testing

**B** - Analyte detected in the associated Method Blank

**J** - Analyte detected below reporting limits

**R** - RPD outside accepted recovery limits

**S** - Spike Recovery outside accepted recovery limits

**X** - Value exceeds Maximum Contaminant Level

**#** - Unknown hydrocarbon

**IDPH** - IL Dept. of Public Health

**C** - Client requested RL below

**D** - Diluted out of sample

**E** - Value above quantitation range

**H** - Holding time exceeded

**MI** - Matrix interference

**DNI** - Did not ignite

ENVIRONMENTAL TESTING LABORATORY

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FAX: 618-344-1005

## LABORATORY RESULTS

**Client:** Philip Environmental  
**WorkOrder:** 08050396  
**Lab ID:** 08050396-001  
**Report Date:** 16-May-08

**Client Project:** A831-735002-012901-225/IP Champ  
**Client Sample ID:** B-802 (8.5-10.0 ft)  
**Collection Date:** 4/15/2008 9:15:00 AM  
**Matrix:** SOLID

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Analyst
<b><u>SW-846 1311, 3010A, 6010B, METALS IN TCLP EXTRACT BY ICP</u></b>								
Arsenic	NELAP	0.250		< 0.250	mg/L	1	5/14/2008 11:09:50 AM	LAL
Barium	NELAP	0.0500		1.20	mg/L	1	5/14/2008 11:09:50 AM	LAL
Cadmium	NELAP	0.0200		< 0.0200	mg/L	1	5/14/2008 11:09:50 AM	LAL
Chromium	NELAP	0.100		< 0.100	mg/L	1	5/14/2008 11:09:50 AM	LAL
Lead	NELAP	0.400		< 0.400	mg/L	1	5/14/2008 11:09:50 AM	LAL
Selenium	NELAP	0.500		< 0.500	mg/L	1	5/14/2008 11:09:50 AM	LAL
Silver	NELAP	0.100		< 0.100	mg/L	1	5/14/2008 11:09:50 AM	LAL
<b><u>SW-846 1311, 7470A IN TCLP EXTRACT</u></b>								
Mercury	NELAP	0.00020		< 0.00020	mg/L	1	5/16/2008	JMW

### [Sample Narrative](#)

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**Client:** Philip Environmental

## DATES REPORT

**Project:** A831-735002-012901-225/IP Champaign 62403053

**Lab Order:** 08050396

**Report Date:** 16-May-08

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Prep Date	Analysis Date
08050396-001A	B-802 (8.5-10.0 ft)	4/15/2008	Solid	SW-846 1311, 3010A, 6010B, Metals in TCLP Extract by ICP	5/13/2008	5/14/2008
				SW-846 1311, 7470A in TCLP Extract	5/15/2008	5/16/2008

**ANALYTICAL QC SUMMARY REPORT**

**Key QC concepts:**

- CCV** Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
- DF** Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilutions factors.
- DUP** Laboratory duplicate is an aliquot of a sample taken from the same container under laboratory conditions for independent processing and analysis independently of the original aliquot. (NELAC)
- ICV** Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
- LCS** Laboratory control sample, spiked with verified known amounts of analytes, is analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system. (NELAC) The acceptable recovery range is listed in this report.
- MS** Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in this report.
- MSD** Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in this report.
- MDL** Method detection limit or limit of detection (LOD) means the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.
- MB/LCB** Method blank or lab control blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses. (NELAC)
- PQL** Practical quantitation limit or limit of quantitation (LOQ) means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions. The acceptable recovery range is listed in this report.
- RL** The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
- RPD** Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in this report.
- SPK** The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes. (NELAC)
- Surr** Surrogates are an organic compound which is similar to the analytes of interest in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples.

Qualifiers			
<b>DF</b> - Dilution Factor	<b>B</b> - Analyte detected in the associated Method Blank	<b>C</b> - Client requested RL below PQL	<b>MI</b> - Matrix interference
<b>RL</b> - Reporting Limit	<b>J</b> - Analyte detected below reporting limits	<b>D</b> - Diluted out of sample	<b>DNI</b> - Did not ignite
<b>ND</b> - Not Detected at the Reporting Limit	<b>R</b> - RPD outside accepted recovery limits	<b>IDPH</b> - IL Dept. of Public Health	<b>E</b> - Value above quantitation range
<b>Surr</b> - Surrogate Standard added by lab	<b>S</b> - Spike Recovery outside accepted recovery limits	<b>Q</b> - QC criteria failed	<b>H</b> - Holding time exceeded
<b>TNTC</b> - Too numerous to count ( > 200 CFU )	<b>X</b> - Value exceeds Maximum Contaminant Level	<b>#</b> - Unknown hydrocarbon	<b>NELAP</b> - IL ELAP and NELAP Accredited

Client: Philip Environmental

Project: A831-735002-012901-225/IP Champaign 62403053

Lab Order: 08050396

Report Date: 16-May-08

## ANALYTICAL QC SUMMARY REPORT

TestCode: M\_HG\_TCLP

Sample ID: <b>MB-44721</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>5/15/2008</b>	RunNo: <b>108221</b>							
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>44721</b>	<b>SOP 3062</b>	Analysis Date: <b>5/16/2008</b>	SeqNo: <b>1949355</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	< 0.00020	0.00020	0.0002000	0	0	-100	100				

Sample ID: <b>LCS-44721</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>5/15/2008</b>	RunNo: <b>108221</b>							
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>44721</b>	<b>SOP 3062</b>	Analysis Date: <b>5/16/2008</b>	SeqNo: <b>1949356</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00487	0.00020	0.005000	0	97.4	85	115				

Sample ID: <b>08050396-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>5/15/2008</b>	RunNo: <b>108221</b>							
Client ID: <b>B-802 (8.5-10.0 ft)M</b>	Batch ID: <b>44721</b>	<b>SOP 3062</b>	Analysis Date: <b>5/16/2008</b>	SeqNo: <b>1949398</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00486	0.00020	0.005000	0	97.2	75	125				

Sample ID: <b>08050396-001AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>5/15/2008</b>	RunNo: <b>108221</b>							
Client ID: <b>B-802 (8.5-10.0 ft)M</b>	Batch ID: <b>44721</b>	<b>SOP 3062</b>	Analysis Date: <b>5/16/2008</b>	SeqNo: <b>1949399</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00507	0.00020	0.005000	0	101.4	75	125	0.004860	4.23	15	

Client: Philip Environmental

# ANALYTICAL QC SUMMARY REPORT

Project: A831-735002-012901-225/IP Champaign 62403053

TestCode: M\_TCLP\_ICP

Lab Order: 08050396

Report Date: 16-May-08

Sample ID: <b>MB-44825</b>	SampType: <b>MBLK</b>	Units: <b>mg/L</b>	Prep Date: <b>5/13/2008</b>	RunNo: <b>108105</b>							
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>44825</b>	<b>SW1311</b>	Analysis Date: <b>5/14/2008</b>	SeqNo: <b>1946457</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	< 0.250	0.250	0.2500	0	0	-100	100				
Barium	< 0.0500	0.0500	0.05000	0	0	-100	100				
Cadmium	< 0.0200	0.0200	0.02000	0	0	-100	100				
Chromium	< 0.100	0.100	0.1000	0	0	-100	100				
Lead	< 0.400	0.400	0.4000	0	0	-100	100				
Selenium	0.24	0.500	0.5000	0	47.0	-100	100				J
Silver	< 0.100	0.100	0.1000	0	0	-100	100				

Sample ID: <b>LCS-44825</b>	SampType: <b>LCS</b>	Units: <b>mg/L</b>	Prep Date: <b>5/13/2008</b>	RunNo: <b>108105</b>							
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>44825</b>	<b>SW1311</b>	Analysis Date: <b>5/14/2008</b>	SeqNo: <b>1946458</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.4	0.250	20.00	0	107.1	85	115				
Barium	21.2	0.0500	20.00	0	106.0	85	115				
Cadmium	0.518	0.0200	0.5000	0	103.6	85	115				
Chromium	2.08	0.100	2.000	0	104.0	85	115				
Lead	5.02	0.400	5.000	0	100.4	85	115				
Selenium	22.1	0.500	20.00	0	110.7	85	115				
Silver	0.487	0.100	0.5000	0	97.4	85	115				

Sample ID: <b>08050396-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>5/13/2008</b>	RunNo: <b>108105</b>							
Client ID: <b>B-802 (8.5-10.0 ft)M</b>	Batch ID: <b>44825</b>	<b>SW1311</b>	Analysis Date: <b>5/14/2008</b>	SeqNo: <b>1946462</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	20.9	0.250	20.00	0	104.4	75	125				
Barium	21.4	0.0500	20.00	1.196	101.0	75	125				
Cadmium	0.502	0.0200	0.5000	0	100.4	75	125				
Chromium	2.06	0.100	2.000	0	103.2	75	125				
Lead	4.82	0.400	5.000	0	96.3	75	125				
Selenium	21.3	0.500	20.00	0	106.6	75	125				



Client: Philip Environmental

# ANALYTICAL QC SUMMARY REPORT

Project: A831-735002-012901-225/IP Champaign 62403053

TestCode: M\_TCLP\_ICP

Lab Order: 08050396

Report Date: 16-May-08

Sample ID: <b>08050396-001AMS</b>	SampType: <b>MS</b>	Units: <b>mg/L</b>	Prep Date: <b>5/13/2008</b>	RunNo: <b>108105</b>							
Client ID: <b>B-802 (8.5-10.0 ft)M</b>	Batch ID: <b>44825</b>	<b>SW1311</b>	Analysis Date: <b>5/14/2008</b>	SeqNo: <b>1946462</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Silver	0.468	0.100	0.5000	0	93.6	75	125				

Sample ID: <b>08050396-001AMSD</b>	SampType: <b>MSD</b>	Units: <b>mg/L</b>	Prep Date: <b>5/13/2008</b>	RunNo: <b>108105</b>							
Client ID: <b>B-802 (8.5-10.0 ft)M</b>	Batch ID: <b>44825</b>	<b>SW1311</b>	Analysis Date: <b>5/14/2008</b>	SeqNo: <b>1946462</b>							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	21.3	0.250	20.00	0	106.3	75	125	20.89	1.76	20	
Barium	21.6	0.0500	20.00	1.196	102.1	75	125	21.40	0.977	20	
Cadmium	0.514	0.0200	0.5000	0	102.8	75	125	0.5020	2.36	20	
Chromium	2.11	0.100	2.000	0	105.4	75	125	2.063	2.21	20	
Lead	4.91	0.400	5.000	0	98.2	75	125	4.817	1.93	20	
Selenium	22.1	0.500	20.00	0	110.6	75	125	21.32	3.68	20	
Silver	0.462	0.100	0.5000	0	92.4	75	125	0.4680	1.29	20	

08050396

# CHAIN-OF-CUSTODY RECORD

TEKLAB, INC  
 5445 Horseshoe Lake Road  
 Collinsville, IL 62234-7425  
 TEL: (618) 344-1004  
 FAX: (618) 344-1005

WorkOrder: 08050396

Client: Philip Environmental  
 210 West Sand Bank Road  
 Columbia, IL 62236-0230  
 TEL: (618) 281-7173  
 FAX: (618) 281-5120  
 Project: A831-735002-012901-225/I  
 09-May-08

Sample ID	ClientSampleID	Matrix	Date Collected	Bottle	Requested Tests	
					SW1311/6010	SW1311/7470
08050396-001	B-802 (8.5-10 ft)	Solid	4/15/2008 9:15:00 AM	B	A	
				A	A	

Comments: data in excel Per Derek Ingram, additional analysis requested on WO# 08040620. HAW 5/9/08

	Date/Time		Date/Time
Relinquished by: _____	Received by: <u>Marvin L. Darling II</u>	Received by: _____	5/9/08
Relinquished by: _____	Received by: _____	Received by: _____	
Relinquished by: _____	Received by: _____	Received by: _____	

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other