ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

May 16, 2008

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



NELAP Accredited #100226

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

WorkOrder: 08050439

Dear Derek Ingram:

TEKLAB, INC received 2 samples on 4/4/2008 5:30:00 PM 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,

Hoadhing A. White

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



ENVIRONMENTAL TESTING LABORATORY

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SAMPLE SUMMARY

Client: Philip Environmental S. Project: A831-735002-012901-225/IP Champaign 62403053 Lab Order: 08050439 Report Date: 16-May-08

Lab Sample ID	Client Sample ID	Fractions	Collection Date
08050439-001	B832 (2-3 ft)	1	4/4/2008 8:53:00 AM
08050439-002	B832 (7-8 ft)	1	4/4/2008 9:09:00 AM



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ENVIRONMENTAL TESTING LABORATORY

CASE NARRATIVE

Client: Philip Environmental Project: A831-735002-012901-225/IP Champaign 62403053 LabOrder: 08050439 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 to WO #08040238. Analysis requested outside of hold time for pH, total cyanide, and amenable cyanide.

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

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Philip Environr	nental			Client P	roject: A83	31-7350	02-012901-225/IP Cha	amp				
WorkOrder: 08050439	WorkOrder: 08050439					Client Sample ID: B832 (2-3 ft)						
Lab ID: 08050439-001	Collectior	Date: 4/4/	/2008 8	3:53:00 AM								
Report Date: 16-May-08				Ν	latrix: SO	LID						
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed Ana	alyst				
SW-846 3050B, 6010B, METALS BY	ICP											
Arsenic	NELAP	2.31		4.16	mg/Kg-dry	1	5/14/2008 4:49:34 PM	LAL				
Chromium	NELAP	0.93		17.0	mg/Kg-dry	1	5/14/2008 4:49:34 PM	LAL				
Lead	NELAP	3.70		74.2	mg/Kg-dry	1	5/13/2008 11:05:30 PM	LAL				
<u>SW-846 9010B, 9014</u>												
Cyanide	NELAP	0.65	н	7.52	mg/Kg-dry	1	5/13/2008	AET				
<u>SW-846 9014A</u>												
Cyanide, Amenable to Chlorination		0.65	Н	Interference	mg/Kg-dry	1	5/14/2008	AET				

Sample Narrative

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

LABORATORY RESULTS

Client: Philip Environ	mental			Client P	roject: A83	31-7350	02-012901-225/IP Cha	amp		
WorkOrder: 08050439		Client Sample ID: B832 (7-8 ft)								
Lab ID: 08050439-00	2			Collectior	n Date: 4/4/	/2008 9):09:00 AM			
Report Date: 16-May-08		Matrix: SOLID								
Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed Ana	alyst		
SW-846 3050B, 6010B, METALS BY	ICP									
Arsenic	NELAP	2.50		5.99	mg/Kg-dry	1	5/14/2008 4:56:21 PM	LAL		
Chromium	NELAP	1.00		25.3	mg/Kg-dry	1	5/14/2008 4:56:21 PM	LAL		
Lead	NELAP	4.00		17.8	mg/Kg-dry	1	5/13/2008 11:12:19 PM	LAL		
SW-846 9010B, 9014										
Cyanide	NELAP	0.64	н	< 0.64	mg/Kg-dry	1	5/13/2008	AET		
<u>SW-846 9014A</u>										
Cyanide, Amenable to Chlorination		0.64	н	Interference	mg/Kg-dry	1	5/14/2008	AET		
<u>SW-846 9045C</u>										
pH (1:1)	NELAP	1.00	н	7.80		1	5/13/2008 1:52:00 PM	KNL		

Sample Narrative

DATES REPORT

ENVIRONMENTAL TESTING LABORATORY

TEL: 618-344-1004 FAX: 618-344-1005

Client: Philip Environmental Project: A831-735002-012901-225/IP Champaign 62403053 Lab Order: 08050439 Report Date: 16-May-08

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Prep Date	Analysis Date
08050439-001A	B832 (2-3 ft)	4/4/2008	Solid	SW-846 3050B, 6010B, Metals by ICP	5/13/2008	5/13/2008
				SW-846 3050B, 6010B, Metals by ICP	5/13/2008	5/14/2008
				SW-846 9010B, 9014	5/12/2008	5/13/2008
				SW-846 9014A	5/13/2008	5/14/2008
08050439-002A	. B832 (7-8 ft)			SW-846 3050B, 6010B, Metals by ICP	5/13/2008	5/13/2008
				SW-846 3050B, 6010B, Metals by ICP	5/13/2008	5/14/2008
				SW-846 9010B, 9014	5/12/2008	5/13/2008
				SW-846 9014A	5/13/2008	5/14/2008
				SW-846 9045C		5/13/2008

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

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

 Lab Order:
 08050439
 Report Date:
 16-May-08

ANALYTICAL QC SUMMARY REPORT

TestCode: I_TCN_S_MT

Sample ID:	MB-R108067	SampType: MBLK			Units: mg/Kg		Prep Date	5/12/20	08	RunNo: 10	3067	
Client ID:	ZZZZZZ	Batch ID: 44826			SW9010		Analysis Date	e: 5/13/20	08	SeqNo: 194	45262	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide		< 0.01	0.01									
Sample ID:	LCS-R108067	SampType: LCS			Units: mg/Kg		Prep Date	: 5/12/20	08	RunNo: 10	3067	
Client ID:	222222	Batch ID: 44826			SW9010		Analysis Date	: 5/13/20	08	SeqNo: 194	45263	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide		0.19	0.01	0.2000	0	94.1	85	115				
Sample ID:	LCSD-R108067	SampType: LCSD			Units: mg/Kg		Prep Date	: 5/12/20	08	RunNo: 10	3067	
Client ID:	222222	Batch ID: 44826			SW9010		Analysis Date	: 5/13/20	08	SeqNo: 194	15264	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide		0.20	0.01	0.2000	0	99.7	85	115	0.1881	5.84	15	
Sample ID:	08050439-002AMS	SampType: MS			Units: mg/Kg-	dry	Prep Date	5/12/20	08	RunNo: 10	3067	
Client ID:	B832 (7-8 ft)MS	Batch ID: 44826			SW9010		Analysis Date	: 5/13/20	08	SeqNo: 194	45271	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide		5.53	0.61	6.135	0	90.2	80	120				Н
Sample ID:	08050439-002AMSD	SampType: MSD			Units: mg/Kg-	dry	Prep Date	: 5/12/20	08	RunNo: 10	3067	
Client ID:	B832 (7-8 ft)MSD	Batch ID: 44826			SW9010		Analysis Date	e: 5/13/20	08	SeqNo: 194	45272	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide		5.66	0.61	6.135	0	92.3	80	120	5.533	2.35	20	Н

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

Lab Order: 08050439 Report Date: 16-May-08

ANALYTICAL QC SUMMARY REPORT

TestCode: L_PH_S_M

Sample ID: LCS-R108062 Client ID: ZZZZZZ	SampType: LCS Batch ID: R108062			Units:		Prep Da Analysis Da	te: te: 5/13/2008		RunNo: 108 SeqNo: 19 4		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD	D Ref Val	%RPD	RPDLimit	Qual
рН (1:1)	7.00	1.00	7.000	0	100	99.1	100.9				
Sample ID: 08050439-002ADUP Client ID: B832 (7-8 ft)DUP	 SampType: DUP Batch ID: R108062 			Units:		Prep Da Analysis Da	te: te: 5/13/2008		RunNo: 108 SeqNo: 194		
		PQL	SPK value	Units: SPK Ref Val	%REC	Analysis Da		D Ref Val			Qual

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

Lab Order: 08050439

Report Date: 16-May-08

ANALYTICAL QC SUMMARY REPORT

TestCode: M_SOLIDS_ICP

Sample ID:	MB-44806	SampType: MBLK			Units: mg/	/Ka-drv	Prep Date	e: 5/13/200)8	RunNo: 108	3079	
Client ID:		Batch ID: 44806			SOP 3032	itg uly	Analysis Date			SeqNo: 194		
0.00.0121												
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		< 2.50	2.50	2.500	0	0	-100	100				
Lead		< 4.00	4.00	4.000	0	0	-100	100				
Sample ID:	LCS-44806	SampType: LCS			Units: mg/	/Kg-dry	Prep Date	e: 5/13/200	08	RunNo: 108	3079	
Client ID:	ZZZZZZ	Batch ID: 44806			SOP 3032		Analysis Date	e: 5/13/200	08	SeqNo: 194	15560	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic		192	2.50	200.0	0	96.2	85	115				
Lead		49.7	4.00	50.00	0	99.4	85	115				
Sample ID:	08050439-002AMS	SampType: MS			Units: mg/	/Kg-dry	Prep Date	e: 5/13/200)8	RunNo: 108	3079	
Client ID:	B832 (7-8 ft)MS	Batch ID: 44806			SOP 3032		Analysis Date	e: 5/13/200	08	SeqNo: 194	15573	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		64.9	4.00	50.00	17.75	94.3	75	125				
Sample ID:	08050439-002AMSD	SampType: MSD			Units: mg/	/Kg-dry	Prep Date	e: 5/13/200)8	RunNo: 108	3079	
Client ID:	B832 (7-8 ft)MSD	Batch ID: 44806			SOP 3032		Analysis Date	e: 5/13/200	08	SeqNo: 194	15574	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead		63.9	4.00	50.00	17.75	92.2	75	125	64.92	1.65	20	
Sample ID:	MB-44806	SampType: MBLK			Units: mg /	/Kg-dry	Prep Date	e: 5/13/200)8	RunNo: 108	3118	
Client ID:	222222	Batch ID: 44806			SOP 3032		Analysis Date	e: 5/14/200	08	SeqNo: 194	17235	
1								L Park L San St				Qual
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

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

Lab Order: 08050439

Report Date: 16-May-08

ANALYTICAL QC SUMMARY REPORT

TestCode: M_SOLIDS_ICP

Sample ID: LCS-44806	SampType: LCS			Units: mg/	Kg-dry	Prep Dat	e: 5/13/20	08	RunNo: 108	8118	
Client ID: ZZZZZZ	Batch ID: 44806			SOP 3032		Analysis Dat	e: 5/14/20	008	SeqNo: 194	17236	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	19.7	1.00	20.00	0	98.6	85	115				
Sample ID: 08050439-002AMS	S SampType: MS			Units: mg/	Kg-dry	Prep Dat	e: 5/13/20	08	RunNo: 108	3118	
Client ID: B832 (7-8 ft)MS	Batch ID: 44806			SOP 3032		Analysis Dat	e: 5/14/20	008	SeqNo: 194	17250	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	191	2.50	200.0	5.990	92.7	75	125				
Chromium	44.9	1.00	20.00	25.34	97.7	75	125				
Sample ID: 08050439-002AMS	SD SampType: MSD			Units: mg/	Kg-dry	Prep Dat	e: 5/13/20	08	RunNo: 108	8118	
Client ID: B832 (7-8 ft)MSD	Batch ID: 44806			SOP 3032		Analysis Dat	e: 5/14/20	008	SeqNo: 194	17251	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	196	2.50	200.0	5.990	94.8	75	125	191.3	2.17	20	
Chromium	45.2	1.00	20.00	25.34	99.4	75	125	44.87	0.755	20	

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

210 West Sand Bank Road Philip Environmental

Client:

FAX: Project

Columbia, IL 62236-0230

0439

08050	
WorkOrder:	

TEL: (618) 281-7173	FAX: (618) 281-5120	oject: A831-735002-012901-225/I	
TEL:	FAX:	oject:	

12-May-08

Requested Tests

					SW6010B	SW9014	SW9014 SW9014 (A) SW9045 C	SW9045 C		
Sample ID	ClientSampID	Matrix	Date Collected	Bottle						
08050439-001	B832 (2-3 ft)	Solid	4/4/2008 8:53:00 AM		۲	A	A			
08050439-002	B832 (7-8 ft)	Solid	4/4/2008 9:09:00 AM		A	A	A	A		
Comments:	data in excel. Additional analysis requested on	<u>onal analysi</u>		40238 pe	WO# 08040238 per Leslie Hoosier. EAH 5/12/08	ier. EAH 5/1	12/08			
			Date/Time	me		2			Date/Time	
Dalinamichad h-					Dooting hu		1 KM-)	5/12/18	
Reminquisment by:	.				ka naviayayi		A Lark		Catalo	
Relinquished by:	y:				Received by:	, 	_			
Relinquished by:	v:				Received by:					

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returmed 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

08050439

Page 1 of 1

CHAIN-OF-CUSTODY RECORD