

## Rice, Tami [DNR]

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**From:** Priya Edara [madhuriya@bellsouth.net]  
**Sent:** Wednesday, September 19, 2007 10:00 AM  
**To:** grisolano.mary@epamail.epa.gov  
**Cc:** Skip Rath; Rice, Tami [DNR]; flintpeyton@seiwaport.com; mike.slavish@hendricksgroup.net  
**Subject:** Keokuk Ferro-Sil LBP & PCB Report  
**Attachments:** 43105.02 Keokuk Ferro-Sil - LBP and PCB Report.pdf

Keokuk Ferro-Sil LBP & PCB Report has been attached as PDF file.

Thank You,

Haripriya Edara  
Drafting Technician  
Solutech, Inc.  
5841 Corporate Way, Suite 102  
West Palm Beach, FL 33407  
Ph# (561)688-2904  
Fax# (561)688-2908  
[madhuriya@bellsouth.net](mailto:madhuriya@bellsouth.net)



September 17, 2007

Ms. Mary Grisolano  
US EPA Region 7, Air and Waste Management Division  
RCRA Corrective Action and Permit Branch  
901 North 5<sup>th</sup> Street  
Kansas City, Kansas 66101

**Subject: Lead Based Paint and PCB Screening - Former Keokuk Ferro-Sil Foundry  
2301 Twin Rivers Drive, Keokuk, Iowa  
US EPA ID# IAD041391772; Solutech File No. 43105.02**

Dear Ms. Grisolano:

Solutech, Inc. (Solutech) is pleased to present the results of our lead based paint (LBP) and polychlorinated biphenyl (PCB) screening at the former Keokuk Ferro-Sil foundry, 2301 Twin Rivers Drive, Keokuk, Iowa (Figure 1, Figures Tab). The screening was requested by the United States Environmental Protection Agency (USEPA) prior to demolition of site buildings.

Twelve paint chip samples and five caulk samples were collected August 30, 2007, at the approximate locations depicted on Figure 2 (Figures Tab). The paint chip samples were analyzed according to EPA Methods 8082 (PCBs) and 1311, Toxic Characteristic Leachate Procedure (TCLP) for lead. Caulk samples were analyzed according to EPA Method 8082 (PCBs). Results of the analyses (summarized in Tables 1.0 to 3.0) indicate LBP and PCBs in paint or caulk are not a concern at the subject property, and will not impede demolition of site buildings.

### **FIELD SAMPLING METHODOLOGY**

On August 30, 2007, paint chip and caulk samples were collected for laboratory analysis for TCLP lead and PCBs. Paint chips were scraped from metal surfaces such as sheet metal walls, doors, and structural steel using a chisel. Caulk samples were collected from joints and along seams between walls and floors, and doors using a chisel and utility knife. Samples were not collected from buildings constructed after 1990, or not slated for demolition. Samples were placed in 4-ounce laboratory-supplied sample jars, packed in a padded box, and shipped to Palm

Beach Environmental Laboratories, West Palm Beach, Florida (NELAC/FDOH Accreditation No. E86957).

### LABORATORY ANALYTICAL RESULTS

Paint chip and caulk samples were analyzed according to EPA Methods 8082 (PCBs) and 1311 (TCLP for lead). No PCBs were detected in any of the paint chip or caulk samples at a concentration greater than the method detection limit of 0.2 micrograms per kilogram (ug/kg). PCB analytical results are summarized in Tables 1.0 and 2.0.

**Table 1.0 PCBs in Caulk (ug/kg)**

Sample ID	PCB Content	Sample Description	IDNR*
C-1	<0.2	Black caulk on east side of exterior sheet metal wall of Ball Mill Building	2200
C-2	<0.2	Gray caulk around electrical panel in Ball Mill Building	2200
C-3	<0.2	Translucent caulk around door in Oil Storage Shop	2200
C-4	<0.2	Gray caulk at base of sheet metal wall on west exterior wall of Furnace Building 9 and 10	2200
C-5	<0.2	Blue caulk at base of north exterior sheet metal wall of Car Thaw Building	2200

\* IDNR Statewide Standard for Soil (Residential)

**Table 2.0 PCBs in Paint (ug/L)**

Sample ID	PCBs	Sample Description	IDNR*
P-1	<0.2	Blue-gray paint on structural steel inside Crushing and Sizing Building	2200
P-2	<0.2	Yellow paint on silo frame I-beams, railings in Crushing and Sizing Building	2200
P-3	<0.2	Gray paint on east exterior sheet metal wall of Ball Mill Building	2200
P-4	<0.2	Gray paint on structural steel in Plunger Shop	2200
P-5	<0.2	Silver-gray paint on sheet metal and structural steel in Plunger Shop	2200
P-6	<0.2	Tan paint on door in Oil Storage Building	2200
P-7	<0.2	Multiple layers of blue, yellow, and green paint on east concrete wall of Refractory Building	2200

Sample ID	PCBs	Sample Description	IDNR*
P-8	<0.2	Tan and green paint on west concrete wall of Refractory Building	2200
P-9	<0.2	Gray and red primer on structural steel of Furnace Building #9	2200
P-10	<0.2	Blue-gray paint on door adjacent east of Furnace Building #9	2200
P-11	<0.2	Paint on structural steel of Waste Water Treatment Plant Building	2200
P-12	<0.2	Blue and yellow paint on structural steel, sheet metal, and railing of Baghouse structural support and plenum	2200

\* IDNR Statewide Standards for Soil (Residential)

TCLP lead was detected in all collected paint chip samples, but at concentrations less than the USEPA Maximum Toxicity Characteristic Regulatory Level of 5.0 milligrams per liter (mg/L). Analytical results are summarized in Table 3.0.

**Table 3.0 TCLP Lead in Paint (mg/L)**

Sample ID	TCLP Lead in Paint	Sample Description	Regulatory Level*
P-1	0.08	Blue-gray paint on structural steel inside Crushing and Sizing Building	5.0
P-2	0.08	Yellow paint on silo frame I-beams, railings in Crushing and Sizing Building	5.0
P-3	0.07	Gray paint on east exterior sheet metal wall of Ball Mill Building	5.0
P-4	0.08	Gray paint on structural steel in Plunger Shop	5.0
P-5	0.08	Silver-gray paint on sheet metal and structural steel in Plunger Shop	5.0
P-6	0.07	Tan paint on door in Oil Storage Building	5.0
P-7	0.07	Multiple layers of blue, yellow, and green paint on east concrete wall of Refractory Building	5.0
P-8	0.06	Tan and green paint on west concrete wall of Refractory Building	5.0
P-9	0.12	Gray and red primer on structural steel of Furnace Building #9	5.0
P-10	0.11	Blue-gray paint on door adjacent east of Furnace Building #9	5.0

Sample ID	TCLP Lead in Paint	Sample Description	Regulatory Level*
P-11	0.10	Paint on structural steel of Waste Water Treatment Plant Building	5.0
P-12	0.10	Blue and yellow paint on structural steel, sheet metal, and railing of Baghouse structural support and plenum	5.0

\* EPA Maximum Toxicity Characteristic Regulatory Level

### CONCLUSIONS

No PCBs were detected in any paint chip or caulk samples collected from buildings at the former Ferro-Sil Foundry. TCLP lead was detected in all paint chip samples, but at concentrations less than the USEPA Maximum Toxicity Characteristic Regulatory Level of 5.0 mg/L. Based on the analytical data, construction debris with painted surfaces or caulk does not present a recycling or disposal concern.

### RECOMMENDATIONS

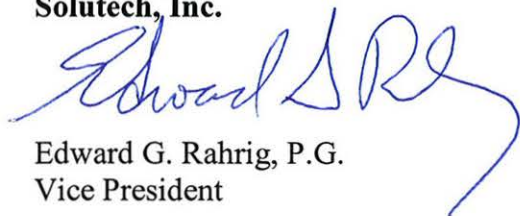
Although PCBs and lead in painted surfaces do not present a concern to demolition of buildings at the subject property, other demolition-related concerns must be considered.

- Fluorescent light fixtures must be removed from buildings and segregated prior to demolition. Ballasts and bulbs must be removed from the light fixtures and placed in labeled drums for proper disposal.
- According to an Iowa Department of Natural Resources (IDNR) representative, the Great River Regional Waste Authority Landfill in Fort Madison is the appropriate facility for receiving non-hazardous construction and demolition waste from the Ferro-Sil site.
- All demolition subcontractors used must have successfully completed the 40-hour OSHA Hazwopper course referenced in 40 CFR Part 1910.120 within the last 12 months.
- The name(s) and address of the scrap yards receiving scrap metal and other recycled materials from the site must be provided.
- The Great River Regional Waste Authority Landfill in Fort Madison must be notified at least 14 days prior to accepting construction debris from the subject property.
- Results of the asbestos demolition survey and potential abatement documentation must be provided to USEPA and IDNR.
- The remaining transformer onsite (east side of Ball Mill Building) must be drained and removed by the owner prior to demolition of the adjacent building.
- Any capacitors identified onsite during demolition should be placed in a drum for proper disposal.

- All remaining liquid wastes (e.g., petroleum contact water, oils, grease, chemicals) must be drained from equipment, removed from buildings, and disposed prior to demolition.
- Emission control (EC) dust residuals found in air emission piping and equipment is potentially hazardous for lead, and must be drummed and tested prior to removal from the site. Piping and equipment exposed to EC dust must be pressure cleaned in accordance with 40 CFR 268.45 prior to removal from the site. Rinsate from the cleaning process must be captured and tested prior to removal from the site.
- Wastewater treatment plant residuals found in wastewater treatment piping and equipment is potentially hazardous for lead, and must be drummed and tested prior to removal from the site. Piping and equipment exposed to wastewater sludge must be pressure cleaned in accordance with 40 CFR 268.45 prior to removal from the site. Rinsate from the cleaning process must be captured and tested prior to removal from the site.

If you have any questions, please do not hesitate to contact us.

Best regards,  
**Solutech, Inc.**



Edward G. Rahrig, P.G.  
Vice President

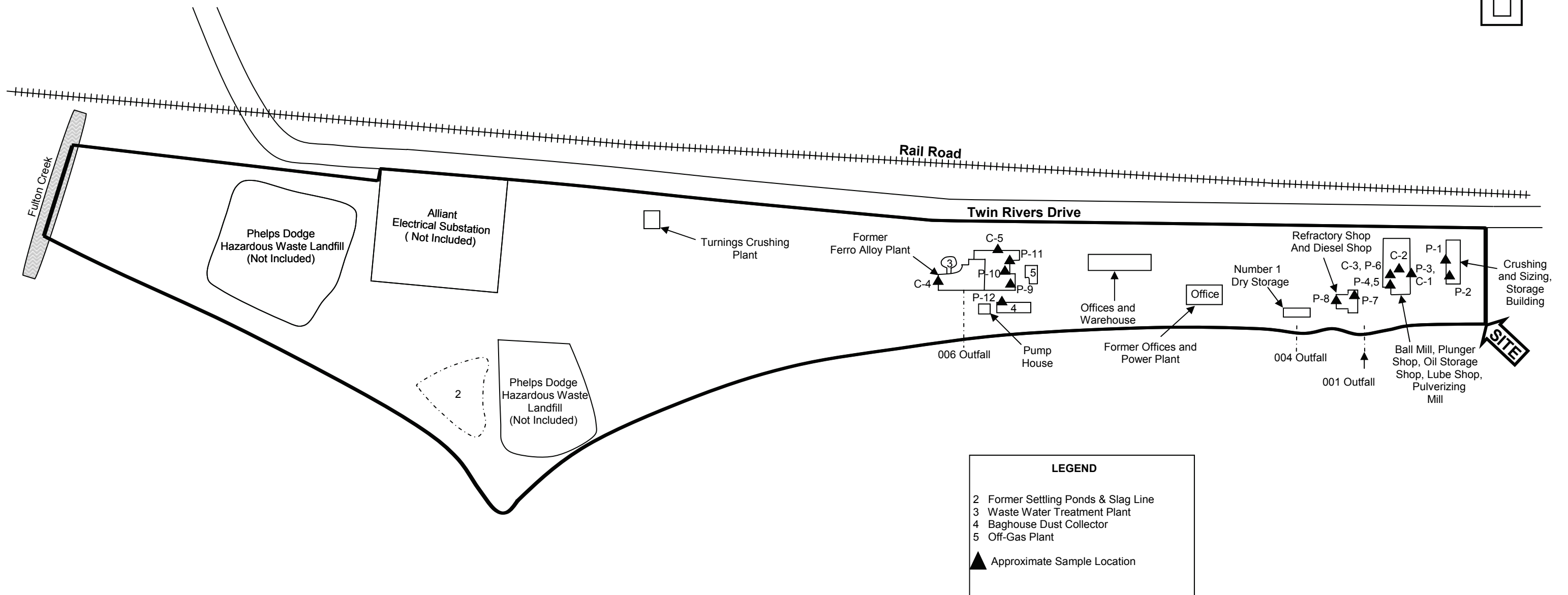
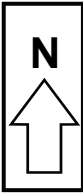


Robert R. Maschue, P.G.  
President

cc: Mike Slavish, Keokuk Properties, LLC, 655 Third St., Suite 301, Beloit, WI 53511  
Skip Rath, Keokuk Properties, LLC, 655 Third St., Suite 301, Beloit, WI 53511  
Flint Peyton, Southeast Iowa Port Terminal, 2301 Twin Rivers Dr., Keokuk, IA 52632  
Tami Rice, IDNR Environmental Services Division, 502 E. 9<sup>th</sup> St., Des Moines, IA 50319  
File



<p><b>SOLUTECH, INC.</b>          5841 Corporate Way, Suite 102          West Palm Beach, FL 33407          Tel: (561)688-2904 Fax: (561)688-2908</p>	<p><b>Paint and Caulk Screening Report</b>  <b>Former Ferro-Sil Foundry</b>  <b>2301 Twin Rivers Drive</b>  <b>Keokuk, Iowa</b></p>		
<p>Site Location Map          Scale As Shown</p>	<p>Drawn By          Priya</p>	<p>Date: September 17, 2007</p>	<p>Figure No.:          1</p>
		<p>Job No.: 43105.02</p>	



After Jacob's (1989) and Forrester (2005)

<b>SOLUTECH, INC.</b> 5841 Corporate Way, Suite 102 West Palm Beach, FL 33407 Tel: (561)688-2904 Fax: (561)688-2908		<b>Paint and Caulk Screening Report</b> <b>Former Ferro-Sil Foundry</b> <b>2301 Twin Rivers Drive</b> <b>Keokuk, Iowa</b>	
Site Area Sketch Not to Scale	Drawn By Priya	Date: September 17, 2007	Figure No.: 2
		Job No.: 43105.02	



Palm Beach Environmental  
Laboratories, Inc.

### CHAIN OF CUSTODY RECORD

Log #: 3378  
PO #: \_\_\_\_\_  
Quote #: \_\_\_\_\_  
FDEP : \_\_\_\_\_

Company Name: <u>Solutech</u>		LAB ANALYSIS										Matrix Codes						
Address: <u>5841 Corporate Way #102</u>		pH										SD	Solid Waste	OL	Oil			
City: <u>West Palm Bch</u> State: <u>FL</u> Zip: <u>33407</u>		PRES CODE										GW	Ground Water	SL	Sludge			
Attn: <u>Ed Rahrig</u> Phone#: <u>561-688-2904</u>		Parameters	TCLP Lead	PCBs								EFF	Effluent	SO	Soil Sediment			
email: _____ Fax#: _____															AFW	Analyte Free H2O	AQ	Aqueous
Project Name: <u>Ferro-Sil</u> Proj#: <u>43105.02</u>															WW	Waste Water	NA	Nonaqueous
Sampler Signature: <u>[Signature]</u> Name: <u>Ed Rahrig</u>															DW	Drinking Water		
#	Sample Label (Client ID)	Collect Date	Collect Time	Matrix	Field Filled	Integrity OK	Total # of containers											
-1	P-1	8/30/07	0800	0			1											
-2	P-2		0900	0			1											
-3	C-2		0930	0			1											
-4	P-3		1000	0			1											
-5	<del>P-3</del> C-1		1015	0			1											
-6	P-4		1030	0			1											
-7	P-5		1100	0			1											
-8	C-3		1300	0			1											
-9	P-6		1330	0			1											
-0	P-7		1345	0			1											

T.A.T. Request		QA/QC Report Level				COC OK	Initials	
Standard	RUSH							
Y/N	24 Hour 48 Hour Date Due:	None 1 2 3 Other				Y N		
Item	Relinquished by	Affiliation	Date	Time	Received By	Affiliation	Date	Time
	<u>[Signature]</u>	<u>Solutech</u>	<u>9/3/07</u>	<u>14:00</u>	<u>[Signature]</u>	<u>PBEL</u>	<u>9/4/07</u>	<u>14:00</u>

	Yes	No	N/A
Sample INTACT upon arrival?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received on Wet Ice? Temp. °C	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Proper Preservatives Indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Custody seals intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volatile rec'd without headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Blue-gray paint on <sup>struc</sup> steel  
yellow paint  
caulk @ base of elec panel  
Gray paint - ext wall  
caulk on east ext wall  
gray paint - plunger stop  
Silver paint - plunger stop  
door caulk - oil storage  
tan paint - oil storage door  
Refractory Bldg Paint 4-colors



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Laboratories, Inc.

Log #: 3378  
PO #: \_\_\_\_\_  
Quote #: \_\_\_\_\_  
FDEP : \_\_\_\_\_

## CHAIN OF CUSTODY RECORD

Company Name: <u>Solutech</u>								LAB ANALYSIS										Matrix Codes					
Address: <u>5841 Corporate Way #102</u>								pH												SD Solid Waste	OL Oil		
City: <u>West Palm Beach</u> State: <u>FL</u> Zip: <u>33407</u>								PRES CODE												GW Ground Water	SL Sludge		
Attn: <u>Ed Rahrig</u> Phone#: <u>561-688-2904</u>								Parameters	TCLP Lead	PCBs											EFF Effluent	SO Soil Sediment	
email: _____ Fax#: _____											AFW Analyte Free H2O	AQ Aqueous											
Project Name: <u>Ferro-Sil</u> Proj#: <u>43/05.02</u>											WW Waste Water	NA Nonaqueous											
Sampler Signature / Name: <u>Ed Rahrig / Ed Rahrig</u>																	DW Drinking Water						
#	Sample Label (Client ID)	Collect Date	Collect Time	Matrix	Field Filtered	Integrity OK	Total # of containers											Press Codes					
<u>_1</u>	<u>P-8</u>	<u>8/30/07</u>	<u>1400</u>	<u>0</u>			<u>1</u>											A. None E. HCL O. Other					
<u>_2</u>	<u>P-9</u>		<u>1600</u>	<u>0</u>			<u>1</u>											B. HNO3 F. MeOH					
<u>_3</u>	<u>C-4</u>		<u>1615</u>	<u>0</u>			<u>1</u>											C. H2SO4 G. Na2S2O3					
<u>_4</u>	<u>P-10</u>		<u>1700</u>	<u>0</u>			<u>1</u>											D. NaOH I. Ice					
<u>_5</u>	<u>C-5</u>		<u>1730</u>	<u>0</u>			<u>1</u>											<u>Tan-Green Paint</u> <u>gray + red struc steel</u> <u>Caulk on west side sheet</u> <u>blue-gray paint on door</u> <u>caulk @ base of car thru</u> <u>WWTP struc steel paint</u> <u>Bag house struc steel</u>					
<u>_6</u>	<u>P-11</u>		<u>1800</u>	<u>0</u>			<u>1</u>																
<u>_7</u>	<u>P-12</u>		<u>1830</u>	<u>0</u>			<u>1</u>																
<u>_8</u>																							
<u>_9</u>																							
<u>_0</u>																							
T.A.T. Request																							
Standard		RUSH		QA/QC Report Level										COC OK		Initials							
Y/N		24 Hour 48 Hour Date Due:		None ___ 1 ___ 2 ___ 3 ___ Other ___										Y N									
Item	Relinquished by	Affiliation	Date	Time	Received By	Affiliation	Date	Time	Lab Use Only														
	<u>[Signature]</u>	<u>Solutech</u>	<u>9/3/07</u>	<u>14:00</u>	<u>[Signature]</u>	<u>PBEL</u>	<u>9/4/07</u>	<u>14:00</u>															
								Sample INTACT upon arrival?	Yes	No	N/A												
								Received on Wet Ice? Temp ___ °C	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>												
								Proper Preservatives Indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
								Received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
								Custody seals intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
								Volatile rec'd without headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>												
								Proper Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												



Palm Beach Environmental  
Laboratories Inc.

## CERTIFICATE OF ANALYSIS

Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-1	<b>Lab ID:</b> 0003378-01	<b>Sampled:</b> 08/30/07 08:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	<b>0.08</b>		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-2	<b>Lab ID:</b> 0003378-02	<b>Sampled:</b> 08/30/07 09:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	<b>0.08</b>		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> C-2	<b>Lab ID:</b> 0003378-03	<b>Sampled:</b> 08/30/07 09:30
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction</u> <u>Date</u>	<u>Analysis</u> <u>Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH



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## CERTIFICATE OF ANALYSIS

Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-3	<b>Lab ID:</b> 0003378-04	<b>Sampled:</b> 08/30/07 10:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	0.07		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> C-1	<b>Lab ID:</b> 0003378-05	<b>Sampled:</b> 08/30/07 10:15
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction</u> <u>Date</u>	<u>Analysis</u> <u>Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH



Palm Beach Environmental  
Laboratories Inc.

## CERTIFICATE OF ANALYSIS

Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-4	<b>Lab ID:</b> 0003378-06	<b>Sampled:</b> 08/30/07 10:30
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	<b>0.08</b>		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Laboratories Inc.

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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-5	<b>Lab ID:</b> 0003378-07	<b>Sampled:</b> 08/30/07 11:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	<b>0.08</b>		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> C-3	<b>Lab ID:</b> 0003378-08	<b>Sampled:</b> 08/30/07 13:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction</u> <u>Date</u>	<u>Analysis</u> <u>Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-6	<b>Lab ID:</b> 0003378-09	<b>Sampled:</b> 08/30/07 13:30
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	0.07		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-7	<b>Lab ID:</b> 0003378-10	<b>Sampled:</b> 08/30/07 13:45
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	<b>0.07</b>		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-8	<b>Lab ID:</b> 0003378-11	<b>Sampled:</b> 08/30/07 14:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	0.06		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-9	<b>Lab ID:</b> 0003378-12	<b>Sampled:</b> 08/30/07 16:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	0.12		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> C-4	<b>Lab ID:</b> 0003378-13	<b>Sampled:</b> 08/30/07 16:15
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-10	<b>Lab ID:</b> 0003378-14	<b>Sampled:</b> 08/30/07 17:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	0.11		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Laboratories Inc.

## CERTIFICATE OF ANALYSIS

Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> C-5	<b>Lab ID:</b> 0003378-15	<b>Sampled:</b> 08/30/07 17:30
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction</u> <u>Date</u>	<u>Analysis</u> <u>Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH



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## CERTIFICATE OF ANALYSIS

Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-11	<b>Lab ID:</b> 0003378-16	<b>Sampled:</b> 08/30/07 18:00
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	<b>0.10</b>		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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Solutech  
5841 Corporate Way Suite 102  
West Palm Beach, FL 33407

**ATTN:** Edward Rahrig  
**PHONE:** (561) 688-2904 **FAX:** (561) 688-2908

**LOG #:** 0003378  
**COC#:** 5105,5106  
**REPORTED:** 9/12/2007 1:18:01PM  
**PROJECT #:** 43105.01  
**PROJECT:** Ferro-Sil

<b>Description:</b> P-12	<b>Lab ID:</b> 0003378-17	<b>Sampled:</b> 08/30/07 18:30
<b>Matrix:</b> Soil	<b>Sampled By:</b> Edward Rahrig	<b>Received:</b> 09/04/07 14:00

### EPA 8082 PCBs

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
1336-36-3	PCBs	0.2	U	ug/kg	EPA 3545 / 8082	1	0.2	2.5	09/06/07	09/12/07	MH

### TCLP EPA 1311

<u>CAS #</u>	<u>Parameter</u>	<u>Results</u>	<u>Q</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Extraction Date</u>	<u>Analysis Date</u>	<u>Analyst</u>
7439-92-1	Lead	<b>0.10</b>		mg/L	EPA 6020B	1	0.00001	0.005	09/07/07	09/12/07	MH



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### Notes and Definitions

U Analyte included in the analysis, but not detected



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Edward Rahrig  
Solutech  
West Palm Beach, FL 33407  
(561) 688-2904  
LOG #: 0003378

September 12, 2007

Enclosed is the laboratory report for your project. All results meet the requirements of the NELAC standards.

Please note the following:

- The samples were received as stated on the chain of custody, correctly labeled and at the proper temperature unless otherwise noted. The results contained in this report relate only to the items tested or to the samples as received by the laboratory.
- This report may not be reproduced except in full, without the written approval of the laboratory. Any anomalies are noted in the case narrative.
- Results for all solid matrices are reported in dry weight unless otherwise noted.
- Results for all liquid matrices are analyzed as received in the laboratory unless otherwise noted.
- Samples are disposed of within 30 days of their receipt by the laboratory.
- A statement of Qualifiers is available upon request.
- Certain analyses are subcontracted to outside NELAC certified laboratories and are designated on your report.
- Precision & Accuracy will be provided when clients require a measure of estimated uncertainty.
- The issuance of the final Certificate of Analysis takes precedence over any previous Preliminary Report Preliminary Data should not be used for regular purposes. Authorized signature(s) is provided on final report only

Please contact me if you have any questions or concerns regarding this report.

Sincerely,

Pamela Shore  
QA Officer  
EPA # FL01227  
HRS# E86957  
SFWMD# 48141  
PBC # VC0000018083