

March 9, 2007

Mr. Mark Riggle  
Project Manager  
Voluntary Cleanup Section  
Texas Commission on Environmental Quality  
Mail Code 221  
12118 North IH 35, Building D  
Austin, Texas 78753

Project No. 0060761

Subject: First Quarter 2007 Monitoring Data Transmittal  
Former Cameron Iron Works Facility, Houston, Texas  
VCP No. 221

Dear Mr. Riggle:

On behalf of Cameron International Corporation (Cameron), Environmental Resources Management (ERM) is providing this transmittal of ground water data collected on February 5, 2007 for your records. Six ground water samples were collected at monitor well locations (MW-70, MW-78, MW-93, MW-96, MW-125, and MW-126) and analyzed for the site-specific constituents of concern (COCs). Additionally, MW-70 was re-sampled on February 16, 2007 to confirm a reported concentration of tetrachloroethene (PCE) reported on February 5, 2007. These sample locations are located in the residential neighborhood south of the Former Cameron Iron Works Facility (the facility). This quarterly sampling event was performed at these locations because the results from October and November 2006 exceeded the following trigger levels:

- the method quantitation limits (MQLs) at MW-70; and
- the critical protective concentration levels PCLs at MW-78, MW-93, MW-96, MW-125, and MW-126.

The following discussion presents the results from the February 2007 sampling events for each location and a recommendation for the appropriate course of action.

#### **MW-70**

The reported concentrations collected on February 5, 2007 at MW-70 for 1,1-dichloroethane (1,1-DCA), cis-1,2-dichloroethene (cis-1,2-DCE), and PCE were 0.0059 mg/L, 0.0032 mg/L, and 0.0070 mg/L, respectively (Attachment 1, Table 1). The remaining constituents were reported as *Not Detected* above the MQLs. The reported concentration for 1,1-DCA is above the MQL of 0.0050 mg/L but below the critical PCL of 2.4 mg/L. Cis-1,2-DCE had an estimated concentration (indicated by a J qualifier in the laboratory report, Attachment 2) below the MQL of 0.0050 mg/L. PCE had a reported concentration of 0.0070 mg/L which is in exceedance of the 0.0050 mg/L critical PCL. Historically, reported concentrations at MW-70 for PCE have been *Not Detected* above the MQL.

A confirmation sample was collected on February 16, 2007 with no reported concentrations above the MQL for PCE. Therefore, the PCE reported concentration of 0.0070 mg/L collected on February 5, 2007 appears to be anomalous. The reported concentrations collected on February 16, 2007 at MW-70 for 1,1-DCA and cis-1,2-DCE were 0.0057 mg/L and 0.0033 mg/L, respectively. The remaining constituents were reported as *Not Detected* above the MQLs. The reported concentration for 1,1-DCA does not exceed the critical PCL. Cis-1,2-DCE had an estimated concentration (indicated by a J qualifier in the laboratory report, Attachment 2) below MQLs of 0.0050 mg/L. The reported concentrations at MW-70 have been stable or decreasing over time.

MW-70 is located approximately 200 feet south of the I-10 feeder road on Buckingham Drive. It is possible that the concentrations are related to ground water flow conditions from subsurface construction and dewatering activities related to the expansion of Interstate 10. For a response action, Cameron will continue monitoring for the COCs at MW-70 on a quarterly basis. The quarterly sampling events would be completed in April 2007 and July 2007, unless further action is necessary.

#### **MW-78**

The reported concentrations at MW-78 for 1,1-DCA, 1,1-dichloroethene (1,1-DCE), cis-1,2-DCE, and PCE were 0.013 mg/L, 0.078 mg/L, 0.0040 mg/L, and 0.0033 mg/L, respectively (Attachment 1, Table 1). The remaining constituents were reported as *Not Detected* above the MQLs. The reported concentration for 1,1-DCA does not exceed the critical PCL. Cis-1,2-DCE and PCE had estimated concentrations (indicated by a J qualifier in the laboratory report, Attachment 2) below the MQLs of 0.0050 mg/L. 1,1-DCE had a reported concentration of 0.078 mg/L. This concentration is in exceedance of the 0.0070 mg/L critical PCL for 1,1-DCE.

As a response action, Cameron will follow the plan outlined in the Response Action Plan. Cameron will monitor for the COCs at MW-78 on a quarterly basis. The quarterly sampling events would be completed in April 2007 and July 2007, unless further action is necessary. In addition, Cameron is in the process of planning an aggressive response action by in-situ chemical oxidation in the vicinity of MW-78 to address the elevated concentration of 1,1-DCE.

#### **MW-93**

The reported concentrations at MW-93 for cis-1,2-DCE, PCE, and trichloroethene (TCE) were 0.00092 mg/L, 0.17 mg/L, and 0.0013 mg/L, respectively (Attachment 1, Table 1). The remaining constituents were reported as *Not Detected* above the MQLs. Cis-1,2-DCE and TCE had estimated concentrations (indicated by a J qualifier in the laboratory report, Attachment 2) below the MQLs of 0.0050 mg/L. PCE had a reported concentration of 0.17 mg/L which is in exceedance of the 0.0050 mg/L critical PCL for PCE. The reported concentrations at MW-93 have been stable over time.

As part of the response action in the area of MW-93, ground water samples will continue to be collected at MW-93 on a quarterly basis and the presence of permanganate will be monitored in monitor wells (MW-93 and MW-125) and injection wells (IW-47 through IW-52). In the event that no evidence for permanganate is present and MW-93 exceeds PCLs, then a permanganate solution shall be injected at the injection well(s) that has no presence of permanganate.

#### **MW-96**

The reported concentrations at MW-96 for 1,1-DCA, 1,1-DCE, and PCE were 0.0014 mg/L, 0.019 mg/L, and 0.0054 mg/L, respectively (Attachment 1, Table 1). The remaining constituents were reported as *Not Detected* above the MQLs. The reported concentration for 1,1-DCA does not exceed the critical PCL. 1,1-DCA had an estimated concentration (indicated by a J qualifier in the laboratory report, Attachment 2) below the MQLs of 0.0050 mg/L. 1,1-DCE and PCE had reported concentrations in exceedance of the critical PCL of 0.0070 mg/L and 0.0050 mg/L, respectively. The reported concentrations at MW-96 have been increasing over time.

As a response action, Cameron will follow the plan outlined in the Response Action Plan. Cameron will add MW-96 to the quarterly monitoring program. The quarterly sampling events would be completed in April 2007 and July 2007, unless further action is necessary. Additionally, Cameron is in the process of planning an aggressive response action by in-situ chemical oxidation in the vicinity of MW-96 to address the elevated concentration of 1,1-DCE and PCE.

#### **MW-125**

The reported concentration at MW-125 for cis-1,2-DCE, PCE, and TCE were 0.0012 mg/L, 0.16 mg/L, and 0.0013 mg/L, respectively (Attachment 1, Table 1). The remaining constituents were reported as *Not Detected* above the MQLs. Cis-1,2-DCE and TCE had estimated concentrations (indicated by a J qualifier in the laboratory report, Attachment 2) below the MQLs of 0.0050 mg/L. PCE had a reported concentration of 0.16 mg/L which is in exceedance of the 0.0050 mg/L critical PCL for PCE. The reported concentrations at MW-125 have been stable to increasing over time.

As part of the response action in the area of MW-125, ground water samples will continue to be collected quarterly at MW-125 and the presence of permanganate will be monitored in monitor wells (MW-93 and MW-125) and injection wells (IW-47 through IW-52). In the event that no evidence for permanganate is present and MW-125 exceeds PCLs, then a permanganate solution shall be injected at the injection well(s) that has no presence of permanganate.

### **MW-126**

The reported concentrations at MW-126 for 1,1-DCA, 1,1-DCE, cis-1,2-DCE, PCE, TCE, and vinyl chloride were 0.0042 mg/L, 0.0037 mg/L, 0.023 mg/L, 0.082 mg/L, 0.039 mg/L, and 0.0025 mg/L, respectively (Attachment 1, Table 1). 1,2-DCA was reported as *Not Detected* above the MQL. 1,1-DCA and 1,1-DCE had estimated concentrations (indicated by a J qualifier in the laboratory report, Attachment 2) below the MQLs of 0.0050 mg/L. The reported concentration for cis-1,2-DCE exceeds the MQL of 0.0050 mg/L but does not exceed the critical PCL of 0.070 mg/L. PCE, TCE, and vinyl chloride had reported concentrations in exceedance of the 0.0050 mg/L and 0.0020 mg/L critical PCLs, respectively. The reported concentrations at MW-126 have been stable or increasing over time.

As a response action, Cameron will follow the plan outlined in the Response Action Plan. Cameron will monitor MW-126 on a quarterly basis. The quarterly sampling events would be completed in April 2007 and July 2007, unless further action is necessary. In addition, Cameron is in the process of planning an aggressive response action by in-situ chemical oxidation in the vicinity of MW-126 to address the elevated concentration of PCE, TCE, and vinyl chloride.

### **Conclusion**

Cameron will transmit a summary of the data for the quarterly sampling events to the Texas Commission on Environmental Quality (TCEQ) within 30 days after it receives a Final Laboratory Report.

Cameron will continue to monitor COC concentrations in ground water at MW-70, MW-93, and MW-125 on a quarterly basis. The quarterly sampling events would be completed in April 2007 and July 2007, unless further action is necessary. In the area of MW-93 and MW-125, injection wells (IW-47 through IW-52) will be monitored for the presence of permanganate. In the event that no evidence for potassium permanganate is present and MW-93 and/or MW-125 exceed critical PCLs, then a permanganate solution shall be injected at the injection well(s) that has no presence of permanganate.

Cameron will monitor COC concentrations in ground water at MW-78, MW-96, and MW-126 on a quarterly basis. Additionally, Cameron is in the process of planning for in-situ chemical oxidation as an active response action in the vicinities of MW-78, MW-96, and MW-126. A meeting has been scheduled for April 13, 2007 with the TCEQ to discuss proposed active response actions.



**Table 1**  
*Attachment 1*

*March 9, 2007*  
*Project No. 0060761*

**Environmental Resources Management**  
15810 Park Ten Place, Suite 300  
Houston, Texas 77084  
(281) 600-1000

TABLE 1

Summary of Monitor Well Ground Water Data  
First Quarter 2007 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

Constituent	MQL	Critical PCLs (a)	Location: MW-70			Location: MW-78		
			Depth: (b) 25			Depth: (b) 26		
			Date: 10/26/2006	Date: 2/5/2007	Date: 2/16/2007	Date: 10/24/2006	Date: 11/10/2006	Date: 2/5/2007
1,1-Dichloroethane	0.0050	2.4	<b>0.0090</b>	<b>0.0059</b>	<b>0.0057</b>	ND (0.0050)	ND (0.0050)	<b>0.013</b>
1,1-Dichloroethene	0.0050	0.0070	0.0015 J	ND (0.0050)	ND (0.0050)	<b>0.0053</b>	<b>0.043</b>	<b>0.078</b>
1,2-Dichloroethane	0.0050	0.0050	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.0050	0.070	<b>0.0057</b>	0.0032 J	0.0033 J	ND (0.0050)	ND (0.0050)	0.0040 J
Tetrachloroethene	0.0050	0.0050	ND (0.0050)	<b>0.0070</b>	ND (0.0050)	ND (0.0050)	ND (0.0050)	0.0033 J
Trichloroethene	0.0050	0.0050	0.0013 J	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020	0.0020	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	MQL	Critical PCLs (a)	Location: MW-93		Location: MW-96		
			Depth: (b) 43		Depth: (b) 33		
			Date: 10/24/2006	Date: 2/5/2007	Date: 10/26/2006	Date: 11/10/2006	Date: 2/5/2007
1,1-Dichloroethane	0.0050	2.4	ND (0.0050)	ND (0.0050)	0.00072 J	0.0020 J	0.0014 J
1,1-Dichloroethene	0.0050	0.0070	ND (0.0050)	ND (0.0050)	<b>0.0082</b>	<b>0.017</b>	<b>0.019</b>
1,2-Dichloroethane	0.0050	0.0050	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.0050	0.070	0.00070 J	0.00092 J	ND (0.0050)	ND (0.0050)	ND (0.0050)
Tetrachloroethene	0.0050	0.0050	<b>0.13</b>	<b>0.17</b>	ND (0.0050)	ND (0.0050)	<b>0.0054</b>
Trichloroethene	0.0050	0.0050	ND (0.0050)	0.0013 J	ND (0.0050)	ND (0.0050)	ND (0.0050)
Vinyl Chloride	0.0020	0.0020	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)

Constituent	MQL	Critical PCLs (a)	Location: MW-125		Location: MW-126		
			Depth: (b) 32		Depth: (b) 25		
			Date: 10/24/2006	Date: 2/5/2007	Date: 10/24/2006	Date: 11/10/2006	Date: 2/5/2007
1,1-Dichloroethane	0.0050	2.4	ND (0.0050)	ND (0.0050)	0.0015 J	0.0024 J	0.0042 J
1,1-Dichloroethene	0.0050	0.0070	ND (0.0050)	ND (0.0050)	0.0026 J	<b>0.0051</b>	0.0037 J
1,2-Dichloroethane	0.0050	0.0050	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)
cis-1,2-Dichloroethene	0.0050	0.070	ND (0.0050)	0.0012 J	ND (0.0050)	ND (0.0050)	<b>0.023</b>
Tetrachloroethene	0.0050	0.0050	<b>0.013</b>	<b>0.16</b>	<b>0.0053</b>	<b>0.0080</b>	<b>0.082</b>
Trichloroethene	0.0050	0.0050	ND (0.0050)	0.0013 J	0.0011 J	0.0022 J	<b>0.039</b>
Vinyl Chloride	0.0020	0.0020	ND (0.0020)	ND (0.0020)	ND (0.0020)	ND (0.0020)	<b>0.0025</b>

NOTES:

**0.0070** = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater critical PCLs.

**Bold** values exceed the MQL

The reported concentrations are in mg/L.

ND (0.0050) = *Not Detected* above the method quantitation limit given in parentheses.

MQL = Method Quantitation Limit.

(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Groundwater PCLs, 30-acre source area, Table 3, table for TRRP Rule dated March 31, 2006.

(b) The sample depths are reported in feet below ground surface.

J = Estimated data, the reported sample concentration is below the sample quantitation limit.

**Data Usability Summaries and Laboratory Reports**  
*Attachment 2*

*March 9, 2007*  
*Project No. 0060761*

**Environmental Resources Management**  
15810 Park Ten Place, Suite 300  
Houston, Texas 77084  
(281) 600-1000



## ATTACHMENT 2-1

### Data Usability Summary and Laboratory Report (0702087) First Quarter 2007 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

Environmental Resources Management (ERM) reviewed a laboratory analytical data package (0702087) from e-Lab Analytical, Inc. of Houston, Texas for the analysis of eight water samples collected on February 5, 2007 at the Former Cameron Iron Works Facility (the facility). Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

**Purpose of Sampling Event:** Confirmation sampling event to monitor select volatile organic compounds (VOCs) in ground water beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision, accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS).

## INTRODUCTION

Eight water samples were provided to the laboratory for VOC analysis. Six ground water samples and one field duplicate sample were analyzed for seven VOCs (1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride). One field blank was collected and analyzed for the seven select VOCs listed above in association with the ground water samples. Table 2-1.1 lists the sample identifications cross-referenced to laboratory identifications.

## DATA REVIEW/ VALIDATION RESULTS

### Analytical Results

Sample data is reported in mg/L for ground water samples. *Not Detected* results are reported as less than the value of the sample quantitation limit as defined by the TRRP rule. Method detection limits (MDLs) and method quantitation limits (MQLs) were also provided as part of the analytical results.

### **Preservation and Holding Times**

The samples were evaluated for agreement with the chain-of-custody (COC). The samples were received in the appropriate containers and in good condition with the paperwork filled out properly. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees Celsius. The samples were preserved in the field as specified in SW-846 TABLE 2-36. Samples were prepared and analyzed within holding times as specified in SW-846 TABLE 2-36.

### **Calibrations and Tunes**

According to the LRC, initial calibration, initial and continuing calibration verification data met SW-846 method requirements for VOC analysis. The LRC also indicated that mass spectral tuning met SW-846 method requirements.

### **Blanks**

VOCs were reported as *Not Detected* in the method blank and the field blank.

### **Surrogate Recoveries**

VOC sample surrogate recoveries were within TCEQ review and reporting limits (TRRP-13).

### **Internal Standards**

According to the LRC, the internal standards were within method-required QC limits.

### **Laboratory Control Samples**

The laboratory control sample (LCS) recoveries were within TCEQ review and reporting limits (TRRP-13).

### **Matrix Spike/Matrix Spike Duplicates**

A project sample was not selected for the MS/MSD analysis for batch R46597.

### **Field Precision**

One field duplicate sample was collected during this sampling event (MW-96/ Dup-020507). Sample/duplicate precision calculations are included in Table 2-1.2. Samples MW-96 and Dup-020507 were reported as detected for 1,1-dichloroethane, 1,1-dichloroethene, and tetrachloroethene. The sample/duplicate precision comparison had a RPD less than the 20% acceptance criteria for 1,1-dichloroethane, 1,1-dichloroethene, and tetrachloroethene; therefore, no qualifiers are required.

### **Field Procedures**

The samples were collected using documented sampling procedures.

## **SUMMARY**

The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the facility.

**TABLE 2-1.1**

Cross Reference Field Sample Identifications and Laboratory Identifications  
e-Lab Analytical Work Order Number 0702087  
First Quarter 2007 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

<b>Field ID</b>	<b>Laboratory ID</b>
Dup-020507	0702087-01
FB-020507	0702087-02
MW-125	0702087-03
MW-96	0702087-04
MW-70	0702087-05
MW-78	0702087-06
MW-126	0702087-07
MW-93	0702087-08

**TABLE 2-1.2**

Field Precision  
e-Lab Analytical Work Order Number 0702087  
First Quarter 2007 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

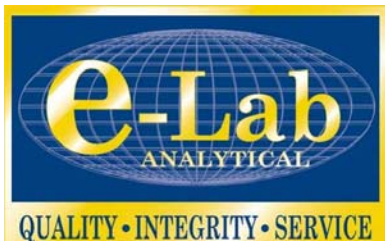
Field Identification	Analyte	Sample Result	Duplicate Result	RPD	Qualified
MW-96/Dup-020507	1,1-dichloroethane	0.0014	0.0013	7.4	A
MW-96/Dup-020507	1,1-dichloroethene	0.019	0.019	0.0	A
MW-96/Dup-020507	tetrachloroethene	0.0054	0.0060	10.5	A

NOTES:

Values are in mg/L.

$RPD = ((SR-DR)*200)/(SR+DR)$

A = Acceptable data



**e-Lab Analytical, Inc.**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 (281) 530-5656 Fax (281) 530-5887

February 13, 2007

Greg Wheeler  
ERM Southwest, Inc.  
15810 Park Ten Place  
Suite 300  
Houston, TX 77084

Tel: (281) 600-1000  
Fax: (281) 600-1001

Re: Former Cameron Iron Works

Work Order : **0702087**

Dear Greg Wheeler,

e-Lab Analytical, Inc. received 8 samples on 2/6/2007 8:50:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab Analytical, Inc. and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by e-Lab Analytical, Inc. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 21.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

*Lora Terrill*

Electronically approved by: Odette E. Elliston

Lora Terrill  
VP Lab Operations



Certificate No: T104704231-06-TX

**CLIENT:** ERM Southwest, Inc.  
**Project:** Former Cameron Iron Works  
**Work Order:** 0702087

**TRRP Laboratory Data  
Package Cover Page**

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation:
- R2 Sample identification cross-reference
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;?
- R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: [NA] This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

**Lora Terrill**

Lora Terrill

VP Lab Operations

## Laboratory Review Checklist: Reportable Data

Laboratory Name: e-Lab Analytical, Inc.		LRC Date: 02/13/2007					
Project Name: Former Cameron Iron Works		Laboratory Job Number: 0702087					
Reviewer Name: Lora Terrill		Prep Batch Number(s): R46597 and R46628					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>CHAIN-OF-CUSTODY (C-O-C)</b>					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>TEST REPORTS</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	<b>SURROGATE RECOVERY DATA</b>					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	<b>TEST REPORTS/SUMMARY FORMS FOR BLANK SAMPLES</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	<b>LABORATORY CONTROL SAMPLES (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits?			X		
R7	OI	<b>MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?		X			1
R8	OI	<b>ANALYTICAL DUPLICATE DATA</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	<b>METHOD QUANTITATION LIMITS (MQLS):</b>					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	<b>OTHER PROBLEMS/ANOMALIES</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				2
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SQLs documented?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3 NA = Not applicable;

4 NR = Not Reviewed;

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

### Laboratory Review Checklist: Supporting Data

Laboratory Name: e-lab Analytical, Inc			LRC Date: 02/13/2007				
Project Name: Former Cameron Iron Works			Laboratory Job Number: 0702087				
Reviewer Name: Lora Terrill			Prep Batch Number(s): R46597 and R46628				
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>INITIAL CALIBRATION (ICAL)</b>					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICCV AND CCV) AND</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	<b>MASS SPECTRAL TUNING:</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>INTERNAL STANDARDS (IS):</b>					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>RAW DATA (NELAC SECTION 1 APPENDIX A GLOSSARY, AND SECTION 5.12 OR</b>					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>DUAL COLUMN CONFIRMATION</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>TENTATIVELY IDENTIFIED COMPOUNDS (TICS):</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>INTERFERENCE CHECK SAMPLE (ICS) RESULTS:</b>					
		Were percent recoveries within method QC limits?			X		
S9	I	<b>SERIAL DILUTIONS, POST DIGESTION SPIKES, AND METHOD OF STANDARD</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	<b>PROFICIENCY TEST REPORTS:</b>					
		Are proficiency testing or inter-laboratory comparison results on file?	X				
S11	OI	<b>METHOD DETECTION LIMIT (MDL) STUDIES</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S12	OI	<b>STANDARDS DOCUMENTATION</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>COMPOUND/ANALYTE IDENTIFICATION PROCEDURES</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>DEMONSTRATION OF ANALYST COMPETENCY (DOC)</b>					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	X				
S16	OI	<b>LABORATORY STANDARD OPERATING PROCEDURES (SOPS):</b>					
		Are laboratory SOPs current and on file for each method performed?	X				

- Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
- O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
- NA = Not applicable.
- NR = Not Reviewed.
- ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



<b>Laboratory Review Checklist: Exception Report</b>	
Laboratory Name: e-Lab Analytical, Inc.	LRC Date: 02/13/2007
Project Name: Former Cameron Iron Works	Laboratory Job Number: 0702087
Reviewer Name: Lora Terrill	Prep Batch Number(s): R46597 and R46628
<b>ER #<sup>1</sup></b>	<b>DESCRIPTION</b>
1	Batch R46597 Volatiles MS/MSD RPD is an unrelated sample.
2	Results for samples MW-96, MW-78, and MW-126 confirmed in duplicate.

- 1 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LRC)

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**CLIENT:** ERM Southwest, Inc.  
**Project:** Former Cameron Iron Works  
**Work Order:** 0702087

**Work Order Sample Summary**

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<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0702087-01	Dup-020507	Water		2/5/2007 17:00	2/6/2007 08:50	<input type="checkbox"/>
0702087-02	FB-020507	Water		2/5/2007 14:05	2/6/2007 08:50	<input type="checkbox"/>
0702087-03	MW-125	Water		2/5/2007 09:55	2/6/2007 08:50	<input type="checkbox"/>
0702087-04	MW-96	Water		2/5/2007 11:55	2/6/2007 08:50	<input type="checkbox"/>
0702087-05	MW-70	Water		2/5/2007 12:55	2/6/2007 08:50	<input type="checkbox"/>
0702087-06	MW-78	Water		2/5/2007 13:55	2/6/2007 08:50	<input type="checkbox"/>
0702087-07	MW-126	Water		2/5/2007 15:00	2/6/2007 08:50	<input type="checkbox"/>
0702087-08	MW-93	Water		2/5/2007 16:10	2/6/2007 08:50	<input type="checkbox"/>

**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-01

**Client Sample ID:** Dup-020507  
**Collection Date:** 2/5/2007 5:00:00 PM

**Matrix:** WATER

Analyses	Result	Qual	SQL	ML	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	0.0013	J	0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	0.019		0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
cis-1,2-Dichloroethene	U		0.00050	0.0050	mg/L	1	2/7/2007
<b>Tetrachloroethene</b>	<b>0.0060</b>		<b>0.00050</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/7/2007
Trichloroethene	U		0.00070	0.0050	mg/L	1	2/7/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	107			70-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	77.2			72-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	107			71-125	%REC	1	2/7/2007
Surr: Toluene-d8	91.7			75-125	%REC	1	2/7/2007

**Qualifiers:** U - Analyzed for but Not Detected      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level      H - Analyzed outside of Hold Time

**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-02

**Client Sample ID:** FB-020507  
**Collection Date:** 2/5/2007 2:05:00 PM  
**Matrix:** WATER

Analyses	Result	Qual	SQL	ML	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	U		0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
cis-1,2-Dichloroethene	U		0.00050	0.0050	mg/L	1	2/7/2007
Tetrachloroethene	U		0.00050	0.0050	mg/L	1	2/7/2007
Trichloroethene	U		0.00070	0.0050	mg/L	1	2/7/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	103			70-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	76.0			72-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	102			71-125	%REC	1	2/7/2007
Surr: Toluene-d8	91.2			75-125	%REC	1	2/7/2007

**Qualifiers:** U - Analyzed for but Not Detected      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level      H - Analyzed outside of Hold Time

**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-03

**Client Sample ID:** MW-125  
**Collection Date:** 2/5/2007 9:55:00 AM

**Matrix:** WATER

Analyses	Result	Qual	SQL	MQL	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	U		0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
<b>cis-1,2-Dichloroethene</b>	<b>0.0012</b>	J	<b>0.00050</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/7/2007
<b>Tetrachloroethene</b>	<b>0.16</b>		<b>0.0025</b>	<b>0.025</b>	<b>mg/L</b>	5	2/8/2007
<b>Trichloroethene</b>	<b>0.0013</b>	J	<b>0.00070</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/7/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	99.5			70-125	%REC	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	92.4			70-125	%REC	5	2/8/2007
Surr: 4-Bromofluorobenzene	75.9			72-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	84.6			72-125	%REC	5	2/8/2007
Surr: Dibromofluoromethane	92.6			71-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	89.9			71-125	%REC	5	2/8/2007
Surr: Toluene-d8	91.3			75-125	%REC	1	2/7/2007
Surr: Toluene-d8	93.5			75-125	%REC	5	2/8/2007

**Qualifiers:** U - Analyzed for but Not Detected S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level H - Analyzed outside of Hold Time

**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-04

**Client Sample ID:** MW-96  
**Collection Date:** 2/5/2007 11:55:00 AM  
**Matrix:** WATER

Analyses	Result	Qual	SQL	ML	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	0.0014	J	0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	0.019		0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
cis-1,2-Dichloroethene	U		0.00050	0.0050	mg/L	1	2/7/2007
<b>Tetrachloroethene</b>	<b>0.0054</b>		<b>0.00050</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/7/2007
Trichloroethene	U		0.00070	0.0050	mg/L	1	2/7/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	105			70-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	77.1			72-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	106			71-125	%REC	1	2/7/2007
Surr: Toluene-d8	91.0			75-125	%REC	1	2/7/2007

**Qualifiers:** U - Analyzed for but Not Detected      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level      H - Analyzed outside of Hold Time

**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-05

**Client Sample ID:** MW-70  
**Collection Date:** 2/5/2007 12:55:00 PM  
**Matrix:** WATER

Analyses	Result	Qual	SQL	MQL	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	0.0059		0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	U		0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
cis-1,2-Dichloroethene	0.0032	J	0.00050	0.0050	mg/L	1	2/7/2007
Tetrachloroethene	0.0070		0.00050	0.0050	mg/L	1	2/7/2007
Trichloroethene	U		0.00070	0.0050	mg/L	1	2/7/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	109			70-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	76.6			72-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	106			71-125	%REC	1	2/7/2007
Surr: Toluene-d8	92.2			75-125	%REC	1	2/7/2007

**Qualifiers:** U - Analyzed for but Not Detected      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level      H - Analyzed outside of Hold Time

**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-06

**Client Sample ID:** MW-78  
**Collection Date:** 2/5/2007 1:55:00 PM

**Matrix:** WATER

Analyses	Result	Qual	SQL	MQL	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	0.013		0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	0.078		0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
cis-1,2-Dichloroethene	0.0040	J	0.00050	0.0050	mg/L	1	2/7/2007
Tetrachloroethene	0.0033	J	0.00050	0.0050	mg/L	1	2/7/2007
Trichloroethene	U		0.00070	0.0050	mg/L	1	2/7/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	103			70-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	77.1			72-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	107			71-125	%REC	1	2/7/2007
Surr: Toluene-d8	91.8			75-125	%REC	1	2/7/2007

**Qualifiers:** U - Analyzed for but Not Detected      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level      H - Analyzed outside of Hold Time



**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-07

**Client Sample ID:** MW-126  
**Collection Date:** 2/5/2007 3:00:00 PM

**Matrix:** WATER

Analyses	Result	Qual	SQL	MQL	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	0.0042	J	0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	0.0037	J	0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane		U	0.00050	0.0050	mg/L	1	2/7/2007
cis-1,2-Dichloroethene	0.023		0.00050	0.0050	mg/L	1	2/7/2007
Tetrachloroethene	0.082		0.00050	0.0050	mg/L	1	2/7/2007
Trichloroethene	0.039		0.00070	0.0050	mg/L	1	2/7/2007
Vinyl chloride	0.0025		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	102			70-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	72.4			72-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	99.7			71-125	%REC	1	2/7/2007
Surr: Toluene-d8	87.7			75-125	%REC	1	2/7/2007

**Qualifiers:** U - Analyzed for but Not Detected      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level      H - Analyzed outside of Hold Time

**e-Lab Analytical, Inc.**

Date: February 13, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702087-08

**Client Sample ID:** MW-93  
**Collection Date:** 2/5/2007 4:10:00 PM

**Matrix:** WATER

Analyses	Result	Qual	SQL	MQL	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
1,1-Dichloroethene	U		0.00060	0.0050	mg/L	1	2/7/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/7/2007
<b>cis-1,2-Dichloroethene</b>	<b>0.00092</b>	J	<b>0.00050</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/7/2007
<b>Tetrachloroethene</b>	<b>0.17</b>		<b>0.00050</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/7/2007
<b>Trichloroethene</b>	<b>0.0013</b>	J	<b>0.00070</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/7/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/7/2007
Surr: 1,2-Dichloroethane-d4	104			70-125	%REC	1	2/7/2007
Surr: 4-Bromofluorobenzene	74.1			72-125	%REC	1	2/7/2007
Surr: Dibromofluoromethane	101			71-125	%REC	1	2/7/2007
Surr: Toluene-d8	88.3			75-125	%REC	1	2/7/2007

**Qualifiers:** U - Analyzed for but Not Detected      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level      H - Analyzed outside of Hold Time

**Test Code:** 8260\_TCL\_W  
**Test Number:** SW8260  
**Test Name:** TCL Volatile Organics  
**Matrix:** Aqueous      **Units:** mg/L

**METHOD DETECTION /  
REPORTING LIMITS**

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,1-Dichloroethane	75-34-3	0.0005	0.005
A	1,1-Dichloroethene	75-35-4	0.0006	0.005
A	1,2-Dichloroethane	107-06-2	0.0005	0.005
A	cis-1,2-Dichloroethene	156-59-2	0.0005	0.005
A	Tetrachloroethene	127-18-4	0.0005	0.005
A	Trichloroethene	79-01-6	0.0007	0.005
A	Vinyl chloride	75-01-4	0.0006	0.002
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	0
S	Surr: 4-Bromofluorobenzene	460-00-4	0	0
S	Surr: Dibromofluoromethane	1868-53-7	0	0
S	Surr: Toluene-d8	2037-26-5	0	0

CLIENT: ERM Southwest, Inc.

**QC BATCH REPORT**

Work Order: 0702087

Project: Former Cameron Iron Works

Batch ID: **R46597**

Instrument ID **VOA2**

Method: **SW8260**

MBLK		Sample ID: <b>VBLKW-070207</b>			Units: <b>µg/L</b>			Analysis Date: <b>02/07/07 11:43</b>		
Client ID:		Run ID: <b>VOA2_070207A</b>			SeqNo: <b>1048132</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethane	U	5.0								
1,1-Dichloroethene	U	5.0								
1,2-Dichloroethane	U	5.0								
cis-1,2-Dichloroethene	U	5.0								
Tetrachloroethene	U	5.0								
Trichloroethene	U	5.0								
Vinyl chloride	U	2.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>47.05</i>	5.0	<i>50</i>	0	<i>94.1</i>	<i>70-125</i>	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>38.18</i>	5.0	<i>50</i>	0	<i>76.4</i>	<i>72-125</i>	0			
<i>Surr: Dibromofluoromethane</i>	<i>47.15</i>	5.0	<i>50</i>	0	<i>94.3</i>	<i>71-125</i>	0			
<i>Surr: Toluene-d8</i>	<i>46.53</i>	5.0	<i>50</i>	0	<i>93.1</i>	<i>75-125</i>	0			

LCS		Sample ID: <b>VLCSW-070207</b>			Units: <b>µg/L</b>			Analysis Date: <b>02/07/07 10:53</b>		
Client ID:		Run ID: <b>VOA2_070207A</b>			SeqNo: <b>1048131</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethane	48.91	5.0	50	0	97.8	76-120	0			
1,1-Dichloroethene	50.74	5.0	50	0	101	73-124	0			
1,2-Dichloroethane	46.38	5.0	50	0	92.8	78-120	0			
cis-1,2-Dichloroethene	47.66	5.0	50	0	95.3	78-120	0			
Tetrachloroethene	48.57	5.0	50	0	97.1	79-120	0			
Trichloroethene	48.64	5.0	50	0	97.3	80-120	0			
Vinyl chloride	50.67	2.0	50	0	101	74-122	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>43.96</i>	5.0	<i>50</i>	0	<i>87.9</i>	<i>70-125</i>	0			
<i>Surr: 4-Bromofluorobenzene</i>	<i>44.82</i>	5.0	<i>50</i>	0	<i>89.6</i>	<i>72-125</i>	0			
<i>Surr: Dibromofluoromethane</i>	<i>45.03</i>	5.0	<i>50</i>	0	<i>90.1</i>	<i>71-125</i>	0			
<i>Surr: Toluene-d8</i>	<i>44.61</i>	5.0	<i>50</i>	0	<i>89.2</i>	<i>75-125</i>	0			

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works

# QC BATCH REPORT

Batch ID: **R46597**      Instrument ID **VOA2**      Method: **SW8260**

MS		Sample ID: <b>0702072-05AMS</b>				Units: <b>µg/L</b>			Analysis Date: <b>02/07/07 12:59</b>	
Client ID:		Run ID: <b>VOA2_070207A</b>			SeqNo: <b>1048134</b>	Prep Date:		DF: <b>1</b>		
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethane	47.83	5.0	50	0	95.7	76-120	0			
1,1-Dichloroethene	44.61	5.0	50	0	89.2	73-124	0			
1,2-Dichloroethane	48.66	5.0	50	0	97.3	78-120	0			
cis-1,2-Dichloroethene	47.33	5.0	50	0	94.7	78-120	0			
Tetrachloroethene	43.21	5.0	50	0	86.4	79-120	0			
Trichloroethene	45.84	5.0	50	0	91.7	80-120	0			
Vinyl chloride	44.21	2.0	50	0	88.4	74-122	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>47.04</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>94.1</i>	<i>70-125</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>46.57</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>93.1</i>	<i>72-125</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>47.1</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>94.2</i>	<i>71-125</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>45.3</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>90.6</i>	<i>75-125</i>	<i>0</i>			

MSD		Sample ID: <b>0702072-05AMSD</b>				Units: <b>µg/L</b>			Analysis Date: <b>02/07/07 13:24</b>	
Client ID:		Run ID: <b>VOA2_070207A</b>			SeqNo: <b>1048135</b>	Prep Date:		DF: <b>1</b>		
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethane	56	5.0	50	0	112	76-120	47.83	15.7	20	
1,1-Dichloroethene	53.71	5.0	50	0	107	73-124	44.61	18.5	20	
1,2-Dichloroethane	55.6	5.0	50	0	111	78-120	48.66	13.3	20	
cis-1,2-Dichloroethene	55.56	5.0	50	0	111	78-120	47.33	16	20	
Tetrachloroethene	51.24	5.0	50	0	102	79-120	43.21	17	20	
Trichloroethene	54.61	5.0	50	0	109	80-120	45.84	17.5	20	
Vinyl chloride	54.82	2.0	50	0	110	74-122	44.21	21.4	20	R
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>45.92</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>91.8</i>	<i>70-125</i>	<i>47.04</i>	<i>2.4</i>	<i>20</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>45.9</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>91.8</i>	<i>72-125</i>	<i>46.57</i>	<i>1.45</i>	<i>20</i>	
<i>Surr: Dibromofluoromethane</i>	<i>47.13</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>94.3</i>	<i>71-125</i>	<i>47.1</i>	<i>0.0573</i>	<i>20</i>	
<i>Surr: Toluene-d8</i>	<i>45.7</i>	<i>5.0</i>	<i>50</i>	<i>0</i>	<i>91.4</i>	<i>75-125</i>	<i>45.3</i>	<i>0.878</i>	<i>20</i>	

The following samples were analyzed in this batch:

0702087-01A	0702087-02A	0702087-03A
0702087-04A	0702087-05A	0702087-06A
0702087-07A	0702087-08A	

ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits      B - Analyte detected in assoc. Method Blank  
 J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits      U - Analyzed for but not detected  
 O - Referenced analyte value is > 4 times amount spiked      P - Dual Column results percent difference > 40%      E - Value above quantitation range

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702087  
**Project:** Former Cameron Iron Works

# QC BATCH REPORT

Batch ID: **R46628**      Instrument ID **VOA2**      Method: **SW8260**

MBLK		Sample ID: <b>VBLKW-070208</b>			Units: <b>µg/L</b>			Analysis Date: <b>02/08/07 11:45</b>		
Client ID:		Run ID: <b>VOA2_070208A</b>			SeqNo: <b>1048876</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	U	5.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	47.4	5.0	50	0	94.8	70-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	38.86	5.0	50	0	77.7	72-125	0			
<i>Surr: Dibromofluoromethane</i>	44.99	5.0	50	0	90	71-125	0			
<i>Surr: Toluene-d8</i>	47.97	5.0	50	0	95.9	75-125	0			

LCS		Sample ID: <b>VLCSW-070208</b>			Units: <b>µg/L</b>			Analysis Date: <b>02/08/07 10:55</b>		
Client ID:		Run ID: <b>VOA2_070208A</b>			SeqNo: <b>1048875</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	44.94	5.0	50	0	89.9	79-120	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	44.8	5.0	50	0	89.6	70-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	45.11	5.0	50	0	90.2	72-125	0			
<i>Surr: Dibromofluoromethane</i>	46.22	5.0	50	0	92.4	71-125	0			
<i>Surr: Toluene-d8</i>	45.34	5.0	50	0	90.7	75-125	0			

MS		Sample ID: <b>0702125-01AMS</b>			Units: <b>µg/L</b>			Analysis Date: <b>02/08/07 14:15</b>		
Client ID:		Run ID: <b>VOA2_070208A</b>			SeqNo: <b>1048882</b>		Prep Date:		DF: <b>500</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	23300	2,500	25000	261.6	92.1	79-120	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	24450	2,500	25000	0	97.8	70-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	23060	2,500	25000	0	92.3	72-125	0			
<i>Surr: Dibromofluoromethane</i>	24550	2,500	25000	0	98.2	71-125	0			
<i>Surr: Toluene-d8</i>	22620	2,500	25000	0	90.5	75-125	0			

MSD		Sample ID: <b>0702125-01AMSD</b>			Units: <b>µg/L</b>			Analysis Date: <b>02/08/07 14:40</b>		
Client ID:		Run ID: <b>VOA2_070208A</b>			SeqNo: <b>1048883</b>		Prep Date:		DF: <b>500</b>	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Tetrachloroethene	21770	2,500	25000	261.6	86	79-120	23300	6.79	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	22750	2,500	25000	0	91	70-125	24450	7.19	20	
<i>Surr: 4-Bromofluorobenzene</i>	23470	2,500	25000	0	93.9	72-125	23060	1.75	20	
<i>Surr: Dibromofluoromethane</i>	22560	2,500	25000	0	90.2	71-125	24550	8.45	20	
<i>Surr: Toluene-d8</i>	23130	2,500	25000	0	92.5	75-125	22620	2.25	20	

**The following samples were analyzed in this batch:** 0702087-03A

- ND - Not Detected at the Reporting Limit
- J - Analyte detected below quantitation limits
- O - Referenced analyte value is > 4 times amount spiked
- S - Spike Recovery outside accepted recovery limits
- R - RPD outside accepted recovery limits
- P - Dual Column results percent difference > 40%
- B - Analyte detected in assoc. Method Blank
- U - Analyzed for but not detected
- E - Value above quantitation range



e-Lab Analytical, Inc.  
 10450 Stanceliff Rd. #210  
 Houston, Texas 77099  
 (Tel) 281.530.5656  
 (Fax) 281.530.5887

# Chain of Custody Form

e-Lab Analytical, Inc.  
 3352 128th Avenue  
 Holland, Michigan 49424  
 (Tel) 616.399.6070  
 (Fax) 616.399.6185

Page 1 of 1

e-Lab Project Manager:

e-Lab Work Order #: 1702087

Customer Information		Project Information		Parameter/Method Request for Analysis												
Purchase Order		Project Name	Former Cameron Iron Works	A	VOC (8260) List B											
Work Order		Project Number	<del>0043400</del> 0060761	B												
Company Name	ERM Southwest, Inc.	Bill To Company	ERM Southwest, Inc.	C												
Send Report To	Greg Wheeler	Invoice Attn	Greg Wheeler	D												
Address	15810 Park Ten Place	Address	15810 Park Ten Place	E												
	Suite 300		Suite 300	F												
City/State/Zip	Houston, TX 77084	City/State/Zip	Houston, TX 77084	G												
Phone	(281) 468-0968	Phone	(281) 468-0968	H												
Fax	(281) 600-1001	Fax	(281) 600-1001	I												
e-Mail Address	drew.hisey@erm.com	e-Mail Address		J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	Dup-020507	2/5/07	1100	Water	HCL	3	X										
2	FB-020507		1405				X										
3	MW-125		0955				X										
4	MW-96		1155				X										*
5	MW-70		1255				X										
6	MW-78		1355				X										*
7	MW-126		1500				X										*
8	MW-93		1610				X										
9																	
10																	

Sampler(s) Please Print & Sign: <i>Dominic Sanders</i>		Shipment Method		Required Turnaround Time: (Check Box) <input type="checkbox"/> Std 10 WK Days <input checked="" type="checkbox"/> 5 WK Days <input type="checkbox"/> Other <input type="checkbox"/> 2 WK Days <input type="checkbox"/> 24 Hour				Results Due Date:			
Relinquished by: <i>Kevin</i>	Date: 2/6/07	Time: 0850	Received by: <i>A.A.</i>	Date: 2/6/07 08:50		Notes: 1 Day TAT.					
Relinquished by:	Date:	Time:	Received by (Laboratory):	e-Lab Analytical Cooler ID: <i>1202</i>	Cooler Temp.:	QC Package: (Check One Box Below)					
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			<input type="checkbox"/> Level II Std QC	<input checked="" type="checkbox"/> TRRP Checklist				
Preservative Key: 1-HCl 2-HNO <sub>3</sub> 3-H <sub>2</sub> SO <sub>4</sub> 4-NaOH 5-Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> 6-NaHSO <sub>4</sub> 7-Other 8-4°C 9-5035						<input type="checkbox"/> Level III Std QC/Raw Data	<input type="checkbox"/> TRRP Level IV				
						<input type="checkbox"/> Level IV SW846/CLP					
						<input type="checkbox"/> Other					

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to e-Lab Analytical, Inc.  
 2. Unless otherwise agreed in a formal contract, services provided by e-Lab Analytical, Inc. are expressly limited to the terms and conditions stated on the reverse.

Copyright 2004 by e-Lab Analytical, Inc.

Sample Receipt Checklist

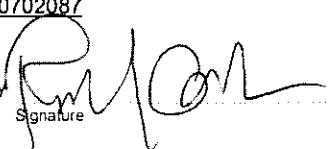
Client Name ERMSW-HOU

Date/Time Received: 2/6/2007 8:50:00 AM

Work Order Number 0702087

Received by: RDH

Checklist completed by

  
Signature

2/6/07  
Date

Reviewed by

KT 2/7/07  
Initials Date

Matrix: W

Carrier name Client

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Temperature(s)/Thermometer(s): 3.6c 002
- Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted
- Water - pH acceptable upon receipt? Yes  No  N/A

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Login Notes: No trip blank was received.

Client contacted \_\_\_\_\_ Date contacted: 2/7/07 Person contacted \_\_\_\_\_


Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: Asterock is to note special handling, KT rather than hold.

Corrective Action \_\_\_\_\_



WA.# 0702017

 <p><b>e-Lab</b> ANALYTICAL</p> <p>QUALITY • INTEGRITY • SERVICE</p>	<p><b>e-Lab Analytical, Inc.</b> 10450 Stancliff Rd., Suite 210 Houston, Texas 77099 Tel. 281.530.5656 Fax. 218.530.5887</p>
--	--

<b>CUSTODY SEAL</b>		Seal Broken By:
Date: <u>2/5/07</u>	Time: <u>1715</u>	<u>RS</u>
Name: <u>DESL</u>		Date:
Company: <u>ELM Inc</u>		<u>2-10-07</u>

## ATTACHMENT 2-2

### Data Usability Summary and Laboratory Report (0702275) First Quarter 2007 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

Environmental Resources Management (ERM) reviewed a laboratory analytical data package (0702275) from e-Lab Analytical, Inc. of Houston, Texas for the analysis of one ground water sample collected on February 16, 2007 at the Former Cameron Iron Works Facility (the facility). Data were reviewed to assess conformance with the requirements of the *Review and Reporting of COC Concentration Data* TRRP-13 (December 2002), and adherence to project data quality objectives.

**Purpose of Sampling Event:** Confirmation sampling event to monitor select volatile organic compounds (VOCs) in ground water beneath and downgradient of the facility.

The data generated were evaluated in terms of representativeness, precision, accuracy, completeness and comparability.

Analysis requested included:

SW-846 8260B - Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Data were reviewed and validated as described in the TRRP-13 Guidance Document and the results of the review/validation are discussed in this Data Usability Summary (DUS).

## INTRODUCTION

One ground water sample was provided to the laboratory and analyzed for seven VOCs (1,1-dichloroethane, 1,1-dichloroethene, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride). Table 2-2.1 lists the sample identifications cross-referenced to laboratory identifications.

## DATA REVIEW/ VALIDATION RESULTS

### Analytical Results

Sample data is reported in mg/L for ground water samples. *Not Detected* results are reported as less than the value of the sample quantitation limit as defined by the TRRP rule. Method detection limits (MDLs) and method quantitation limits (MQLs) were also provided as part of the analytical results.

### Preservation and Holding Times

The sample was evaluated for agreement with the chain-of-custody (COC). The sample was received in the appropriate containers and in good condition with the paperwork filled out

properly. Sample receipt temperature was within the acceptance criteria of 4 +/- 2 degrees Celsius. The sample was preserved in the field as specified in SW-846 TABLE 2-36. The sample was prepared and analyzed within holding times as specified in SW-846 TABLE 2-36.

#### **Calibrations and Tunes**

According to the LRC, initial calibration, initial and continuing calibration verification data met SW-846 method requirements for VOC analysis. The LRC also indicated that mass spectral tuning met SW-846 method requirements.

#### **Blanks**

VOCs were reported as *Not Detected* in the method blank.

#### **Surrogate Recoveries**

VOC sample surrogate recoveries were within TCEQ review and reporting limits (TRRP-13).

#### **Internal Standards**

According to the LRC, the internal standards were within method-required QC limits.

#### **Laboratory Control Samples**

The laboratory control sample (LCS) recoveries were within TCEQ review and reporting limits (TRRP-13).

#### **Matrix Spike/Matrix Spike Duplicates**

A project sample was not selected for the MS/MSD analysis for batch R46895.

#### **Field Precision**

A field duplicate sample was not collected during this sampling event.

#### **Field Procedures**

The samples were collected using documented sampling procedures.

### **SUMMARY**

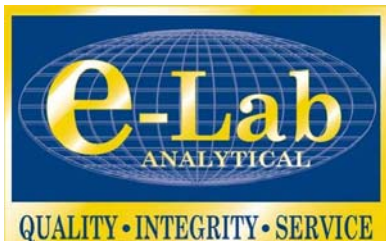
The data quality objectives and characteristics (i.e., representativeness, precision and accuracy, completeness, and comparability) for the project were met. Therefore, the ground water analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water beneath and downgradient of the facility.

**TABLE 2-2.1**

Cross Reference Field Sample Identifications and Laboratory Identifications  
e-Lab Analytical Work Order Number 0702275  
First Quarter 2007 Monitoring Data Transmittal

Former Cameron Iron Works Facility  
Houston, Texas

<b>Field ID</b>	<b>Laboratory ID</b>
MW-70	0702275-01



**e-Lab Analytical, Inc.**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338 (281) 530-5656 Fax (281) 530-5887

February 19, 2007

Greg Wheeler  
ERM Southwest, Inc.  
15810 Park Ten Place  
Suite 300  
Houston, TX 77084

Tel: (281) 600-1000  
Fax: (281) 600-1001

Re: Former Cameron Iron Works

Work Order : **0702275**

Dear Greg Wheeler,

e-Lab Analytical, Inc. received 1 sample on 2/16/2007 10:05:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by e-Lab Analytical, Inc. and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by e-Lab Analytical, Inc. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

*Lora Terrill*

Electronically approved by: Ed B. Fry

Lora Terrill  
VP Lab Operations



Certificate No: T104704231-06-TX

**CLIENT:** ERM Southwest, Inc.  
**Project:** Former Cameron Iron Works  
**Work Order:** 0702275

**TRRP Laboratory Data  
Package Cover Page**

This data package consists of all or some of the following as applicable:

This signature page, the laboratory review checklist, and the following reportable data:

- R1 Field chain-of-custody documentation:
- R2 Sample identification cross-reference
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- R4 Surrogate recovery data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- R5 Test reports/summary forms for blank samples;
- R6 Test reports/summary forms for laboratory control samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - c) The laboratory's LCS QC limits.
- R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- R8 Laboratory analytical duplicate (if applicable) recovery and precision:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;?
- R10 Other problems or anomalies.

The Exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release Statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: [NA] This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

**Lora Terrill**

Lora Terrill

VP Lab Operations

## Laboratory Review Checklist: Reportable Data

Laboratory Name: e-Lab Analytical, Inc.		LRC Date: 02/19/2007					
Project Name: Former Cameron Iron Works		Laboratory Job Number: 0702275					
Reviewer Name: Lora Terrill		Prep Batch Number(s): R48695					
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
R1	OI	<b>CHAIN-OF-CUSTODY (C-O-C)</b>					
		1) Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report?	X				
R2	OI	<b>SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION</b>					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	OI	<b>TEST REPORTS</b>					
		1) Were all samples prepared and analyzed within holding times?	X				
		2) Other than those results < MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Was % moisture (or solids) reported for all soil and sediment samples?			X		
		8) If required for the project, TICs reported?			X		
R4	O	<b>SURROGATE RECOVERY DATA</b>					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	<b>TEST REPORTS/SUMMARY FORMS FOR BLANK SAMPLES</b>					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations < MQL?	X				
R6	OI	<b>LABORATORY CONTROL SAMPLES (LCS):</b>					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	X				
		6) Was the LCSD RPD within QC limits?			X		
R7	OI	<b>MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA</b>					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?		X			1
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	OI	<b>ANALYTICAL DUPLICATE DATA</b>					
		1) Were appropriate analytical duplicates analyzed for each matrix?			X		
		2) Were analytical duplicates analyzed at the appropriate frequency?			X		
		3) Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	<b>METHOD QUANTITATION LIMITS (MQLS):</b>					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs included in the laboratory data package?	X				
R10	OI	<b>OTHER PROBLEMS/ANOMALIES</b>					
		1) Are all known problems/anomalies/special conditions noted in this LRC and ER?	X				
		2) Were all necessary corrective actions performed for the reported data?	X				
		3) If requested, is the justification for elevated SQLs documented?	X				

1 Items identified by the letter "R" should be included in the laboratory data package submitted in o the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.

2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable);

3 NA = Not applicable;

4 NR = Not Reviewed;

5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

### Laboratory Review Checklist: Supporting Data

Laboratory Name: e-lab Analytical, Inc			LRC Date: 02/19/2007				
Project Name: Former Cameron Iron Works			Laboratory Job Number: 0702275				
Reviewer Name: Lora Terrill			Prep Batch Number(s): R48695				
# <sup>1</sup>	A <sup>2</sup>	Description	Yes	No	NA <sup>3</sup>	NR <sup>4</sup>	ER# <sup>5</sup>
S1	OI	<b>INITIAL CALIBRATION (ICAL)</b>					
		1) Were response factors (RFs) and/or relative response factors (RRFs) for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	OI	<b>INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICCV AND CCV) AND</b>					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analyte within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	<b>MASS SPECTRAL TUNING:</b>					
		1) Was the appropriate compound for the method used for tuning?	X				
		2) Were ion abundance data within the method-required QC limits?	X				
S4	O	<b>INTERNAL STANDARDS (IS):</b>					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	<b>RAW DATA (NELAC SECTION 1 APPENDIX A GLOSSARY, AND SECTION 5.12 OR</b>					
		1) Were the raw data (e.g., chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	O	<b>DUAL COLUMN CONFIRMATION</b>					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	<b>TENTATIVELY IDENTIFIED COMPOUNDS (TICS):</b>					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	<b>INTERFERENCE CHECK SAMPLE (ICS) RESULTS:</b>					
		Were percent recoveries within method QC limits?			X		
S9	I	<b>SERIAL DILUTIONS, POST DIGESTION SPIKES, AND METHOD OF STANDARD</b>					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	<b>PROFICIENCY TEST REPORTS:</b>					
		Are proficiency testing or inter-laboratory comparison results on file?	X				
S11	OI	<b>METHOD DETECTION LIMIT (MDL) STUDIES</b>					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCSs?	X				
S12	OI	<b>STANDARDS DOCUMENTATION</b>					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	<b>COMPOUND/ANALYTE IDENTIFICATION PROCEDURES</b>					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	<b>DEMONSTRATION OF ANALYST COMPETENCY (DOC)</b>					
		1) Was DOC conducted consistent with NELAC 5C or ISO/IEC 4.2.2?	X				
		2) Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	<b>VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS</b>					
		Are all the methods used to generate the data documented, verified, and validated, where applicable, (NELAC 5.10.2 or ISO/IEC 17025 Section 5.4.5)?	X				
S16	OI	<b>LABORATORY STANDARD OPERATING PROCEDURES (SOPS):</b>					
		Are laboratory SOPs current and on file for each method performed?	X				

- 1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
- 2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable).
- 3 NA = Not applicable.
- 4 NR = Not Reviewed.
- 5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).



<b>Laboratory Review Checklist: Exception Report</b>	
Laboratory Name: e-Lab Analytical, Inc.	LRC Date: 02/19/2007
Project Name: Former Cameron Iron Works	Laboratory Job Number: 0702275
Reviewer Name: Lora Terrill	Prep Batch Number(s): R48695
<b>ER #<sup>1</sup></b>	<b>DESCRIPTION</b>
1	Batch R46895 Volatile Organics, Sample 0702267-01: MS/MSD is an unrelated sample.

- 1 ER# = Exception Report identification number (an Exception Report should be completed for an item if “NR” or “No” is checked on the LRC)

---

**CLIENT:** ERM Southwest, Inc.  
**Project:** Former Cameron Iron Works  
**Work Order:** 0702275

**Work Order Sample Summary**

---

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
0702275-01	MW-70	Water		2/16/2007 09:10	2/16/2007 10:05	<input type="checkbox"/>

**e-Lab Analytical, Inc.**

Date: February 19, 2007

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702275  
**Project:** Former Cameron Iron Works  
**Lab ID:** 0702275-01

**Client Sample ID:** MW-70  
**Collection Date:** 2/16/2007 9:10:00 AM

**Matrix:** WATER

Analyses	Result	Qual	SQL	MQL	Units	Dilution Factor	Date Analyzed
<b>TCL VOLATILE ORGANICS</b>			Method: <b>SW8260</b>			Analyst: <b>PC</b>	
1,1-Dichloroethane	0.0057		0.00050	0.0050	mg/L	1	2/16/2007
1,1-Dichloroethene	U		0.00060	0.0050	mg/L	1	2/16/2007
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/16/2007
<b>cis-1,2-Dichloroethene</b>	<b>0.0033</b>	J	<b>0.00050</b>	<b>0.0050</b>	<b>mg/L</b>	1	2/16/2007
Tetrachloroethene	U		0.00050	0.0050	mg/L	1	2/16/2007
Trichloroethene	U		0.00070	0.0050	mg/L	1	2/16/2007
Vinyl chloride	U		0.00060	0.0020	mg/L	1	2/16/2007
Surr: 1,2-Dichloroethane-d4	110			70-125	%REC	1	2/16/2007
Surr: 4-Bromofluorobenzene	107			72-125	%REC	1	2/16/2007
Surr: Dibromofluoromethane	111			71-125	%REC	1	2/16/2007
Surr: Toluene-d8	105			75-125	%REC	1	2/16/2007

**Qualifiers:** U - Analyzed for but Not Detected S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits P - Dual Column results RPD > 40%  
 B - Analyte detected in the associated Method Blank E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level H - Analyzed outside of Hold Time

**Test Code:** 8260\_TCL\_W  
**Test Number:** SW8260  
**Test Name:** TCL Volatile Organics  
**Matrix:** Aqueous      **Units:** mg/L

**METHOD DETECTION /  
 REPORTING LIMITS**

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,1-Dichloroethane	75-34-3	0.0005	0.005
A	1,1-Dichloroethene	75-35-4	0.0006	0.005
A	1,2-Dichloroethane	107-06-2	0.0005	0.005
A	cis-1,2-Dichloroethene	156-59-2	0.0005	0.005
A	Tetrachloroethene	127-18-4	0.0005	0.005
A	Trichloroethene	79-01-6	0.0007	0.005
A	Vinyl chloride	75-01-4	0.0006	0.002
S	Surr: 1,2-Dichloroethane-d4	17060-07-0	0	0
S	Surr: 4-Bromofluorobenzene	460-00-4	0	0
S	Surr: Dibromofluoromethane	1868-53-7	0	0
S	Surr: Toluene-d8	2037-26-5	0	0

e-Lab Analytical, Inc.

Date: Feb 19 2007

CLIENT: ERM Southwest, Inc.

QC BATCH REPORT

Work Order: 0702275

Project: Former Cameron Iron Works

Batch ID: R46895

Instrument ID VOA1

Method: SW8260

MBLK		Sample ID: VBLKW-070216				Units: µg/L			Analysis Date: 02/16/07 12:06		
Client ID:		Run ID: VOA1_070216A				SeqNo: 1054553		Prep Date:		DF: 1	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1-Dichloroethane	U	5.0									
1,1-Dichloroethene	U	5.0									
1,2-Dichloroethane	U	5.0									
cis-1,2-Dichloroethene	U	5.0									
Tetrachloroethene	U	5.0									
Trichloroethene	U	5.0									
Vinyl chloride	U	2.0									
Surr: 1,2-Dichloroethane-d4	49.14	5.0	50	0	98.3	70-125	0				
Surr: 4-Bromofluorobenzene	54.75	5.0	50	0	109	72-125	0				
Surr: Dibromofluoromethane	54.85	5.0	50	0	110	71-125	0				
Surr: Toluene-d8	57.3	5.0	50	0	115	75-125	0				

LCS		Sample ID: VLCSW-070216				Units: µg/L			Analysis Date: 02/16/07 11:12		
Client ID:		Run ID: VOA1_070216A				SeqNo: 1054552		Prep Date:		DF: 1	
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1-Dichloroethane	48.03	5.0	50	0	96.1	76-120	0				
1,1-Dichloroethene	49.32	5.0	50	0	98.6	73-124	0				
1,2-Dichloroethane	51.57	5.0	50	0	103	78-120	0				
cis-1,2-Dichloroethene	48.24	5.0	50	0	96.5	78-120	0				
Tetrachloroethene	53.02	5.0	50	0	106	79-120	0				
Trichloroethene	48.6	5.0	50	0	97.2	80-120	0				
Vinyl chloride	42.91	2.0	50	0	85.8	74-122	0				
Surr: 1,2-Dichloroethane-d4	54.1	5.0	50	0	108	70-125	0				
Surr: 4-Bromofluorobenzene	53.71	5.0	50	0	107	72-125	0				
Surr: Dibromofluoromethane	53.21	5.0	50	0	106	71-125	0				
Surr: Toluene-d8	55.2	5.0	50	0	110	75-125	0				

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

O - Referenced analyte value is > 4 times amount spiked

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

P - Dual Column results percent difference > 40%

B - Analyte detected in assoc. Method Blank

U - Analyzed for but not detected

E - Value above quantitation range

**CLIENT:** ERM Southwest, Inc.  
**Work Order:** 0702275  
**Project:** Former Cameron Iron Works

# QC BATCH REPORT

Batch ID: **R46895**      Instrument ID **VOA1**      Method: **SW8260**

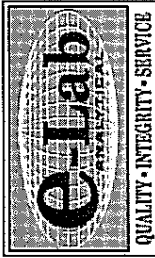
MS		Sample ID: <b>0702267-01AMS</b>				Units: <b>µg/L</b>		Analysis Date: <b>02/16/07 15:43</b>		
Client ID:		Run ID: <b>VOA1_070216A</b>			SeqNo: <b>1054557</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethane	47.3	5.0	50	0	94.6	76-120	0			
1,1-Dichloroethene	42.27	5.0	50	0	84.5	73-124	0			
1,2-Dichloroethane	51.89	5.0	50	0	104	78-120	0			
cis-1,2-Dichloroethene	47.26	5.0	50	0	94.5	78-120	0			
Tetrachloroethene	42.6	5.0	50	0	85.2	79-120	0			
Trichloroethene	48.05	5.0	50	0	96.1	80-120	0			
Vinyl chloride	36.5	2.0	50	0	73	74-122	0			S
<i>Surr: 1,2-Dichloroethane-d4</i>	55.2	5.0	50	0	110	70-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	51.52	5.0	50	0	103	72-125	0			
<i>Surr: Dibromofluoromethane</i>	55.92	5.0	50	0	112	71-125	0			
<i>Surr: Toluene-d8</i>	51.54	5.0	50	0	103	75-125	0			

MSD		Sample ID: <b>0702267-01AMSD</b>				Units: <b>µg/L</b>		Analysis Date: <b>02/16/07 16:10</b>		
Client ID:		Run ID: <b>VOA1_070216A</b>			SeqNo: <b>1054558</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethane	48.13	5.0	50	0	96.3	76-120	47.3	1.74	20	
1,1-Dichloroethene	42.74	5.0	50	0	85.5	73-124	42.27	1.1	20	
1,2-Dichloroethane	49.62	5.0	50	0	99.2	78-120	51.89	4.49	20	
cis-1,2-Dichloroethene	48.97	5.0	50	0	97.9	78-120	47.26	3.54	20	
Tetrachloroethene	43.63	5.0	50	0	87.3	79-120	42.6	2.41	20	
Trichloroethene	45.81	5.0	50	0	91.6	80-120	48.05	4.78	20	
Vinyl chloride	33.63	2.0	50	0	67.3	74-122	36.5	8.18	20	S
<i>Surr: 1,2-Dichloroethane-d4</i>	53.19	5.0	50	0	106	70-125	55.2	3.7	20	
<i>Surr: 4-Bromofluorobenzene</i>	53.01	5.0	50	0	106	72-125	51.52	2.84	20	
<i>Surr: Dibromofluoromethane</i>	54.99	5.0	50	0	110	71-125	55.92	1.67	20	
<i>Surr: Toluene-d8</i>	51.7	5.0	50	0	103	75-125	51.54	0.302	20	

The following samples were analyzed in this batch:

0702275-01A

- |   |   |   |
|---|---|---|
| ND - Not Detected at the Reporting Limit                | S - Spike Recovery outside accepted recovery limits | B - Analyte detected in assoc. Method Blank |
| J - Analyte detected below quantitation limits          | R - RPD outside accepted recovery limits            | U - Analyzed for but not detected           |
| O - Referenced analyte value is > 4 times amount spiked | P - Dual Column results percent difference > 40%    | E - Value above quantitation range          |



e-Lab Analytical, Inc.  
 10450 Stancil Rd. #210  
 Houston, Texas 77099  
 (Tel) 281.530.5656  
 (Fax) 281.530.5887

# Chain of Custody Form

Page 1 of 1

e-Lab Analytical, Inc.  
 3352 128th Avenue  
 Holland, Michigan 49424  
 (Tel) 616.399.6070  
 (Fax) 616.399.6185

Customer Information				Project Information				Parameter/Method Request for Analysis									
Purchase Order	Project Name	Former Cameron Iron Works	A	VOC (8260) Select													
Work Order	Project Number	0060761	B														
Company Name	Bill To Company	ERM Southwest, Inc.	C														
Send Report To	Invoice Ath	Greg Wheeler	D														
Address	Address	15810 Park Ten Place Suite 300	E														
City/State/Zip	City/State/Zip	Houston, TX 77084	F														
Phone	Phone	(281) 468-0988	G														
Fax	Fax	(281) 600-1001	H														
e-Mail/Address	e-Mail Address		I														
			J														
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	MW-70	2/16/07	9:10	H2O	HCL	3											
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign	Shipment Method	Required Turnaround Time: (Check Box)	Other	Results Due Date
Jane's Rayatz James Rayatz	Drop - Off	5 WK Days	24-hr TAT.	
Relinquished by	Received by (Laboratory)	5 WK Days	Notes:	
Jane's Rayatz James Rayatz	[Signature]	2/16/07	24-hr TAT.	
Relinquished by:	Checked by (Laboratory)	10:05	QC Package: (Check One Box Below)	
[Signature]	[Signature]	2/16/07	Level II Std QC	<input checked="" type="checkbox"/>
		10:05	Level III Std QC/Raw Data	<input type="checkbox"/>
			Level IV SW846/CLP	<input type="checkbox"/>
			Other	<input type="checkbox"/>

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to e-Lab Analytical, Inc.  
 2. Unless otherwise agreed in a formal contract, services provided by e-Lab Analytical, Inc. are expressly limited to the terms and conditions stated on the reverse.

Copyright 2004 by e-Lab Analytical, Inc.

Sample Receipt Checklist

Client Name ERMSW-HOU

Date/Time Received: 2/16/2007 10:05:00 AM

Work Order Number 0702275

Received by: RNG

Checklist completed by

[Signature] 2/16/07  
Signature Date

Reviewed by

[Initials] 2/16/07  
Initials Date

Matrix: Water

Carrier name Client

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Yes  No
- Temperature(s)/Thermometer(s):
- Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted
- Water - pH acceptable upon receipt? Yes  No  N/A

Adjusted? \_\_\_\_\_ Checked by \_\_\_\_\_

Login Notes: No trip blank was received.

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_

Corrective Action \_\_\_\_\_