

March 2, 2009

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. 0096401

Subject: First Quarter 2009 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 Southwest, Inc. (ERM) is providing this transmittal of ground water data to the Texas Commission on Environmental Quality (TCEQ) for your records. This report presents a summary of the actions undertaken to monitor the apparent movement of the plume in some areas downgradient of the Former Cameron Iron Works Facility (the facility). A summary table (Table 1, Attachment 1) has been created to convey this information, as well as the future course of action for each area.

Six ground water samples, including one duplicate sample, were collected on January 19 and February 9, 2009 at monitor well locations (MW-125, MW-167, MW-170, MW-171, and MW-172) and analyzed for the site-specific constituents of concern (COCs). These sample locations are located in the residential neighborhood south of the facility. This quarterly sampling event was performed at these locations because the results from October 2008 exceeded the method quantitation limits (MQLs). A summary of the ground water analytical data for the First Quarter 2009 Sampling Event is presented in Table 2. The data usability summaries and laboratory reports are provided as Attachment 2.

On January 19, 2009 one surface water sample was collected from SWD-15 and analyzed for site-specific COCs. This quarterly sample was collected because the October 2008 results exceeded 80% of the critical PCL. A summary of surface water analytical data for the First Quarter 2009 is presented in Table 3. The data usability summary and laboratory report is provided in Attachment 2.

The ground water and surface water analytical results were compared to the response action items outlined in the *Response Action Plan* (RAP) dated August 28, 2003 and summarized in Table 1.

During the First Quarter 2009, additional properties were notified of affected ground water in the area of MW-172.

March 2, 2009
Mr. Mark Riggle
Texas Commission on Environmental Quality
Page 2

Conclusion

The following response actions will be initiated to meet the requirements of the RAP:

- COC concentrations will be monitored at MW-125, MW-167, MW-170, MW-171, and MW-172 on a quarterly basis;
- Monitoring/injection wells will continue to be monitored for the presence of permanganate;
- COC concentrations will be monitored at MW-170 and MW-172 on a quarterly basis until reported concentrations are confirmed with 4 consecutive quarters of reported concentrations above the critical PCL; and
- Injection of Sodium Permanganate into 45 selected wells.

The next scheduled ground water monitoring event will be the semiannual sampling event in April 2009, when all wells will be monitored. In July 2009, only select trigger wells will be monitored during the scheduled quarterly sampling event as outlined in the RAP.

Please contact Mr. Ted Fasting of Cameron International Corporation at (713) 513-3325 or me at (281) 600-1074 with any questions or comments.

Sincerely,

Environmental Resources Management Southwest, Inc.



Gregory J. Wheeler, P.G.

GJW/mnt
Attachments

cc: Marsha Hill, Texas Commission on Environmental Quality, Region X II
Ted Fasting, Cameron International Corporation
Bruce Himmelreich, Cameron International Corporation (without attachments)
Clayton Trier, Stablewood Property Owners Association
Robin Morse, Crain, Caton, and James, P.C.
Scott Himes, Environmental Resources Management (Houston)

Tables
Attachment 1

March 2, 2009
Project No. 0096401

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

TABLE 1

Summary of Response Action Plan Implementation
First Quarter 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility
Houston, Texas

<u>Well</u>	<u>COCs elevated above MQL</u>	<u>COCs elevated above PCL</u>	<u>Need for Additional Notification (Yes or No)</u>	<u>In-situ Treatment (Yes or No)</u>	<u>Sampling Frequency</u>
MW-125	tetrachloroethene	tetrachloroethene	no (a)	yes (b)	Quarterly
MW-167	1,1-dichloroethene	1,1-dichloroethene	no (a)	yes (b)	Quarterly
MW-170	1,1-dichloroethene, cis-1,2-dichloroethene, trichloroethene	1,1-dichloroethene, trichloroethene	no (a)	no (c)	Quarterly
MW-171	none	none	no	no	Quarterly
MW-172	1,1-dichloroethene	1,1-dichloroethene	no (a)	no (c)	Quarterly

NOTES:

COCs = Chemicals of Concern

MQL = Method Quantitation Limit

PCL = Protective Concentration Level

(a) Properties in the vicinity of the affected ground water have been previously notified.

(b) Injection wells located in this area have been injected with sodium permanganate during August 2008.

This area is being gauged regularly for the presence of permanganate. Additional permanganate will be injected during March 2009.

(c) MW-170 and MW-172 will continue to be monitored on a quarterly basis until the reported concentrations are confirmed with four consecutive quarters of reported concentrations above the critical PCL.

TABLE 2

Summary of Monitor Well Ground Water Data for Trigger Wells
First Quarter 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility
Houston, Texas

Constituent	MQL	Critical PCLs (a)	Location:	MW-125	MW-167	MW-170	MW-171	MW-172
			Depth: (b)	32'	38'	25'	25'	25'
Date:			1/29/2009	1/29/2009	1/29/2009	2/9/2009	1/29/2009	
1,1-Dichloroethane	0.0050	4.9	ND (0.0050)	0.0040 J	0.0021 J	0.0016 J	0.0026 J	
1,1-Dichloroethene	0.0050	0.0070	ND (0.0050)	0.037	0.015	0.0014 J	0.014	
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)	ND (0.0050)	0.0093	0.0011 J	0.0020 J	
Tetrachloroethene	0.0050	0.0050	0.012	ND (0.0050)	ND (0.0050)	ND (0.0050)	ND (0.0050)	
Trichloroethene	0.0050	0.0050	ND (0.0050)	ND (0.0050)	0.016	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)	

NOTES:

The reported concentrations are in mg/L.

0.0120 = exceedance of TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Ground Water critical PCLs.

Bold values exceed the MQL.

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

MQL = Method Quantitation Limit.

(a) TCEQ Texas Risk Reduction Program (TRRP) Tier 1 Residential Class 2 Ground Water PCLs, Table 3, table for TRRP Rule dated April 27, 2008.

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

J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.

TABLE 3

Summary of Surface Water Data
First Quarter 2009 Monitoring Data Transmittal

Former Cameron Iron Works Facility
Houston, Texas

Constituent	Critical PCLs (a)	80% Critical PCL (a)	Location: Date:	SWD-15 1/29/2009
1,1-Dichloroethane	5.13	4.10		0.0023 J
1,1-Dichloroethene	0.06	0.05		0.027
1,2-Dichloroethane	0.554	0.443		ND (0.0050)
cis-1,2-Dichloroethene	9.36	7.49		0.0020 J
Tetrachloroethene	0.790	0.632		0.0019 J
Trichloroethene	1.110	0.888		0.0035 J
Vinyl Chloride	0.0336	0.0269		0.0011 J

NOTES:

The reported concentrations are in mg/L.

Bold value exceeds 80% PCL.

ND (0.0050) = *Not Detected* at the Reporting Limit given in parentheses.

J = Estimated data, the reported sample concentration is approximated due to exceedance of QC requirements.

(a) Taken from the critical PCLs calculated in the *Human Health Ecological Risk Assessment for Surface Water and Sediment*, dated June 2003.

SWD = Surface Water Harris County Flood Control Ditch.

Data Usability Summaries and Laboratory Reports
Attachment 2

March 2, 2009
Project No. 0096401

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

Attachment 2-1

Data Usability Summary First Quarter 2009 Ground Water Monitoring Event

Former Cameron Iron Works Facility
Houston, Texas

Environmental Resources Management (ERM) reviewed a laboratory analytical data package (0901558) from ALS Laboratory Group of Houston, Texas (the laboratory) for the analysis of five ground water samples and one surface water sample collected on January 19, 2009 south of the Former Cameron Iron Works Site in Houston, Texas (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: Quarterly sampling event to monitor select VOCs downgradient of the facility as a response actions triggered by the October 2008 results.

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

Analysis requested included:

SW-846 8260B - Volatile Organic Compounds (VOCs) 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

Five ground water samples including one duplicate ground water sample and one surface water sample were provided to the laboratory for analysis. The samples were analyzed for seven volatile organic compounds (1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride). One trip blank was provided to the laboratory but was not analyzed per ERM's request. Rinsate, equipment and field blanks were not provided to the laboratory for analysis. 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 detection limit (SDL) as defined by the TRRP rule. Sample detection limits (SDLs) 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 temperatures were within the acceptance criteria of 4 ± 2 °C. The samples were preserved in the field as specified in SW-846 Table 4-1. Samples were prepared and analyzed within holding times as specified in SW-846 Table 4-1.

Calibrations and Tunes

Initial and continuing calibration verification was within method acceptance limits for VOC. The LRC also documents satisfactory instrument performance calibrations (GC/MS tunes) for VOC analyses.

Blanks

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

Internal Standards and Surrogate Recoveries

VOC sample surrogate recoveries were within the laboratory defined acceptance limits, and according to the LRC, the internal standards were within method-required limits.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicates (LCS/LCSD) recoveries met the laboratory defined acceptance limits for VOCs.

Matrix Spike/Matrix Spike Duplicates

VOC analysis batch R72915 matrix spike/matrix spike duplicate (MS/MSD) was not project related; therefore they were not assessed.

Field Precision

One field duplicate sample was collected and analyzed in this laboratory package (MW-172/Dup-1).

Sample MW-172 and duplicate sample Dup-1 were reported as detected for 1,1-dichloroethane; 1,1-dichloroethene; and cis-1,2-dichloroethene. The sample/duplicate precision comparison for both samples had RPD less than the 20% acceptance criteria for the above mentioned volatiles; therefore, qualifiers were not necessary. Sample/duplicate precision calculations are included in Table 2-1-2.

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 analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water downgradient of the Former Cameron Iron Works Facility.

TABLE 2-1-1

Cross Reference Field Sample Identifications and Laboratory Identifications
First Quarter 2009 Ground Water Monitoring Event

Former Cameron Iron Works Facility
Houston, Texas

Field ID	Laboratory ID
SWD-15	0901558-01
Dup-1	0901558-02
MW-125	0901558-03
MW-167	0901558-04
MW-170	0901558-05
MW-172	0901558-06
Trip Blank	0901558-07

TABLE 2-1-2

Field Precision
First Quarter 2009 Ground Water Monitoring Event

Former Cameron Iron Works Facility
Houston, Texas

Field Identification	Analyte	Sample Result	Duplicate Result	RPD Absolute Value	Qualified
MW-172/Dup-1	1,1-Dichloroethane	0.0026	0.0027	3.773584906	A
	1,1-Dichloroethene	0.014	0.015	6.896551724	A
	cis-1,2-Dichloroethene	0.002	0.0022	9.523809524	A

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

A - Acceptable Data



Environmental Division

04-Feb-09

Scott Himes
ERM Southwest, Inc.
15810 Park Ten Place
Suite 300
Houston, TX 77084

Tel: (281) 600-1149
Fax: (281) 600-1001

Re: Former Cameron Iron Works 1st Qtr. 2009

Work Order : **0901558**

Dear Scott,

ALS Laboratory Group received 7 samples on 1/29/2009 03:15 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group 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 ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

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

Sincerely,

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations



Certificate No: T104704231-08-TX

ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

Phone: (281) 530-5656 Fax: (281) 530-5887

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A Campbell Brothers Limited Company

Client: ERM Southwest, Inc.
Project: Former Cameron Iron Works 1st Qtr. 2009
Work Order: 0901558

**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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed 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 sign the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this c package and is by signature affirming the above release statement is true.



Lora Terrill

VP Lab Operations

Laboratory Review Checklist: Reportable Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 02/04/2009			
Project Name: FORMER CAMERON IRON WORKS				Laboratory Job Number: 0901558			
Reviewer Name: Lora Terrill				Prep Batch Number(s): R72915			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	CHAIN-OF-CUSTODY (C-O-C)					
		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	SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION					
		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	TEST REPORTS					
		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	SURROGATE RECOVERY DATA					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	TEST REPORTS/SUMMARY FORMS FOR BLANK SAMPLES					
		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	LABORATORY CONTROL SAMPLES (LCS):					
		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	MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA					
		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				
R8	OI	ANALYTICAL DUPLICATE DATA					
		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	METHOD QUANTITATION LIMITS (MQLS):					
		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	OTHER PROBLEMS/ANOMALIES					
		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: ALS Laboratory Group			LRC Date: 02/04/2009				
Project Name: FORMER CAMERON IRON WORKS			Laboratory Job Number: 0901558				
Reviewer Name: Lora Terrill			Prep Batch Number(s): R72915				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	INITIAL CALIBRATION (ICAL)					
		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	INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICCV AND CCV) AND					
		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	MASS SPECTRAL TUNING:					
		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	INTERNAL STANDARDS (IS):					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	RAW DATA (NELAC SECTION 1 APPENDIX A GLOSSARY, AND SECTION 5.12 OR					
		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	DUAL COLUMN CONFIRMATION					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	TENTATIVELY IDENTIFIED COMPOUNDS (TICS):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	INTERFERENCE CHECK SAMPLE (ICS) RESULTS:					
		Were percent recoveries within method QC limits?			X		
S9	I	SERIAL DILUTIONS, POST DIGESTION SPIKES, AND METHOD OF STANDARD					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	PROFICIENCY TEST REPORTS:					
		Are proficiency testing or inter-laboratory comparison results on file?	X				
S11	OI	METHOD DETECTION LIMIT (MDL) STUDIES					
		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	STANDARDS DOCUMENTATION					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	COMPOUND/ANALYTE IDENTIFICATION PROCEDURES					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	DEMONSTRATION OF ANALYST COMPETENCY (DOC)					
		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	VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS					
		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	LABORATORY STANDARD OPERATING PROCEDURES (SOPS):					
		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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 02/04/2009
Project Name: FORMER CAMERON IRON WORKS	Laboratory Job Number: 0901558
Reviewer Name: Lora Terrill	Prep Batch Number(s): R72915
ER #¹	DESCRIPTION
	No Exceptions.

- 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 1st Qtr. 2009
Work Order: 0901558

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>
0901558-01	SWD-15	Water		1/29/2009 08:40	1/29/2009 15:15	<input type="checkbox"/>
0901558-02	Dup-1	Water		1/29/2009 09:30	1/29/2009 15:15	<input type="checkbox"/>
0901558-03	MW-125	Water		1/29/2009 10:18	1/29/2009 15:15	<input type="checkbox"/>
0901558-04	MW-167	Water		1/29/2009 11:38	1/29/2009 15:15	<input type="checkbox"/>
0901558-05	MW-170	Water		1/29/2009 13:23	1/29/2009 15:15	<input type="checkbox"/>
0901558-06	MW-172	Water		1/29/2009 14:08	1/29/2009 15:15	<input type="checkbox"/>
0901558-07	Trip Blank	Water		1/29/2009 14:08	1/29/2009 15:15	<input type="checkbox"/>

ALS Laboratory Group

Date: 04-Feb-09

Client: ERM Southwest, Inc.
 Project: Former Cameron Iron Works 1st Qtr. 2009
 Sample ID: SWD-15
 Collection Date: 1/29/2009 08:40 AM

Work Order: 0901558
 Lab ID: 0901558-01
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			Method: SW8260				Analyst: PC
1,1-Dichloroethane	0.0023	J	0.00050	0.0050	mg/L	1	1/30/2009
1,1-Dichloroethene	0.027		0.00050	0.0050	mg/L	1	1/30/2009
1,2-Dichloroethane		U	0.00050	0.0050	mg/L	1	1/30/2009
cis-1,2-Dichloroethene	0.0020	J	0.00050	0.0050	mg/L	1	1/30/2009
Tetrachloroethene	0.0019	J	0.00060	0.0050	mg/L	1	1/30/2009
Trichloroethene	0.0035	J	0.00050	0.0050	mg/L	1	1/30/2009
Vinyl chloride	0.0011	J	0.00050	0.0020	mg/L	1	1/30/2009
Surr: 1,2-Dichloroethane-d4	105			70-125	%REC	1	1/30/2009
Surr: 4-Bromofluorobenzene	92.6			72-125	%REC	1	1/30/2009
Surr: Dibromofluoromethane	99.2			71-125	%REC	1	1/30/2009
Surr: Toluene-d8	95.9			75-125	%REC	1	1/30/2009

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
 a - Not accredited n - Not offered for accreditation

ALS Laboratory Group

Date: 04-Feb-09

Client: ERM Southwest, Inc.
 Project: Former Cameron Iron Works 1st Qtr. 2009
 Sample ID: Dup-1
 Collection Date: 1/29/2009 09:30 AM

Work Order: 0901558
 Lab ID: 0901558-02
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			Method: SW8260			Analyst: PC	
1,1-Dichloroethane	0.0027	J	0.00050	0.0050	mg/L	1	1/30/2009
1,1-Dichloroethene	0.015		0.00050	0.0050	mg/L	1	1/30/2009
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	1/30/2009
cis-1,2-Dichloroethene	0.0022	J	0.00050	0.0050	mg/L	1	1/30/2009
Tetrachloroethene	U		0.00060	0.0050	mg/L	1	1/30/2009
Trichloroethene	U		0.00050	0.0050	mg/L	1	1/30/2009
Vinyl chloride	U		0.00050	0.0020	mg/L	1	1/30/2009
Surr: 1,2-Dichloroethane-d4	109			70-125	%REC	1	1/30/2009
Surr: 4-Bromofluorobenzene	94.7			72-125	%REC	1	1/30/2009
Surr: Dibromofluoromethane	100			71-125	%REC	1	1/30/2009
Surr: Toluene-d8	97.0			75-125	%REC	1	1/30/2009

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
 a - Not accredited n - Not offered for accreditation

ALS Laboratory Group

Date: 04-Feb-09

Client: ERM Southwest, Inc.
Project: Former Cameron Iron Works 1st Qtr. 2009
Sample ID: MW-125
Collection Date: 1/29/2009 10:18 AM

Work Order: 0901558
Lab ID: 0901558-03
Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			Method: SW8260			Analyst: PC	
1,1-Dichloroethane	U		0.00050	0.0050	mg/L	1	1/30/2009
1,1-Dichloroethene	U		0.00050	0.0050	mg/L	1	1/30/2009
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	1/30/2009
cis-1,2-Dichloroethene	U		0.00050	0.0050	mg/L	1	1/30/2009
Tetrachloroethene	0.012		0.00060	0.0050	mg/L	1	1/30/2009
Trichloroethene	U		0.00050	0.0050	mg/L	1	1/30/2009
Vinyl chloride	U		0.00050	0.0020	mg/L	1	1/30/2009
Surr: 1,2-Dichloroethane-d4	108			70-125	%REC	1	1/30/2009
Surr: 4-Bromofluorobenzene	94.5			72-125	%REC	1	1/30/2009
Surr: Dibromofluoromethane	101			71-125	%REC	1	1/30/2009
Surr: Toluene-d8	97.3			75-125	%REC	1	1/30/2009

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

ALS Laboratory Group

Date: 04-Feb-09

Client: ERM Southwest, Inc.
 Project: Former Cameron Iron Works 1st Qtr. 2009
 Sample ID: MW-167
 Collection Date: 1/29/2009 11:38 AM

Work Order: 0901558
 Lab ID: 0901558-04
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			Method: SW8260				Analyst: PC
1,1-Dichloroethane	0.0040	J	0.00050	0.0050	mg/L	1	1/30/2009
1,1-Dichloroethene	0.037		0.00050	0.0050	mg/L	1	1/30/2009
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	1/30/2009
cis-1,2-Dichloroethene	U		0.00050	0.0050	mg/L	1	1/30/2009
Tetrachloroethene	U		0.00060	0.0050	mg/L	1	1/30/2009
Trichloroethene	U		0.00050	0.0050	mg/L	1	1/30/2009
Vinyl chloride	U		0.00050	0.0020	mg/L	1	1/30/2009
Surr: 1,2-Dichloroethane-d4	107			70-125	%REC	1	1/30/2009
Surr: 4-Bromofluorobenzene	93.3			72-125	%REC	1	1/30/2009
Surr: Dibromofluoromethane	100			71-125	%REC	1	1/30/2009
Surr: Toluene-d8	97.3			75-125	%REC	1	1/30/2009

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
 a - Not accredited n - Not offered for accreditation

ALS Laboratory Group

Date: 04-Feb-09

Client: ERM Southwest, Inc.
 Project: Former Cameron Iron Works 1st Qtr. 2009
 Sample ID: MW-170
 Collection Date: 1/29/2009 01:23 PM

Work Order: 0901558
 Lab ID: 0901558-05
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			Method: SW8260			Analyst: PC	
1,1-Dichloroethane	0.0021	J	0.00050	0.0050	mg/L	1	1/30/2009
1,1-Dichloroethene	0.015		0.00050	0.0050	mg/L	1	1/30/2009
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	1/30/2009
cis-1,2-Dichloroethene	0.0093		0.00050	0.0050	mg/L	1	1/30/2009
Tetrachloroethene	U		0.00060	0.0050	mg/L	1	1/30/2009
Trichloroethene	0.016		0.00050	0.0050	mg/L	1	1/30/2009
Vinyl chloride	U		0.00050	0.0020	mg/L	1	1/30/2009
Surr: 1,2-Dichloroethane-d4	109			70-125	%REC	1	1/30/2009
Surr: 4-Bromofluorobenzene	94.2			72-125	%REC	1	1/30/2009
Surr: Dibromofluoromethane	102			71-125	%REC	1	1/30/2009
Surr: Toluene-d8	97.2			75-125	%REC	1	1/30/2009

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
 a - Not accredited n - Not offered for accreditation

ALS Laboratory Group

Date: 04-Feb-09

Client: ERM Southwest, Inc.
 Project: Former Cameron Iron Works 1st Qtr. 2009
 Sample ID: MW-172
 Collection Date: 1/29/2009 02:08 PM

Work Order: 0901558
 Lab ID: 0901558-06
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			Method: SW8260				Analyst: PC
1,1-Dichloroethane	0.0026	J	0.00050	0.0050	mg/L	1	1/30/2009
1,1-Dichloroethene	0.014		0.00050	0.0050	mg/L	1	1/30/2009
1,2-Dichloroethane		U	0.00050	0.0050	mg/L	1	1/30/2009
cis-1,2-Dichloroethene	0.0020	J	0.00050	0.0050	mg/L	1	1/30/2009
Tetrachloroethene		U	0.00060	0.0050	mg/L	1	1/30/2009
Trichloroethene		U	0.00050	0.0050	mg/L	1	1/30/2009
Vinyl chloride		U	0.00050	0.0020	mg/L	1	1/30/2009
Surr: 1,2-Dichloroethane-d4	106			70-125	%REC	1	1/30/2009
Surr: 4-Bromofluorobenzene	92.2			72-125	%REC	1	1/30/2009
Surr: Dibromofluoromethane	99.2			71-125	%REC	1	1/30/2009
Surr: Toluene-d8	95.3			75-125	%REC	1	1/30/2009

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
a - Not accredited	n - Not offered for accreditation

WorkOrder: 0901558
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,1-Dichloroethane	75-34-3	0.0005	0.005
A	1,1-Dichloroethene	75-35-4	0.0005	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	0.0006	0.005
A	Trichloroethene	79-01-6	0.0005	0.005
A	Vinyl chloride	75-01-4	0.0005	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

ALS Laboratory Group

Date: 04-Feb-09

Client: ERM Southwest, Inc.

QC BATCH REPORT

Work Order: 0901558

Project: Former Cameron Iron Works 1st Qtr. 2009

Batch ID: **R72915** Instrument ID **VOA2** Method: **SW8260**

MBLK Sample ID: **VBLKW-013009-R72915** Units: **µg/L** Analysis Date: **1/30/2009 11:07 AM**

Client ID: Run ID: **VOA2_090130A** SeqNo: **1592706** Prep Date: DF: **1**

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								
Surr: 1,2-Dichloroethane-d4	53.46	5.0	50	0	107	70-125	0			
Surr: 4-Bromofluorobenzene	48.42	5.0	50	0	96.8	72-125	0			
Surr: Dibromofluoromethane	51.03	5.0	50	0	102	71-125	0			
Surr: Toluene-d8	49.95	5.0	50	0	99.9	75-125	0			

LCS Sample ID: **VLCSW-013009-R72915** Units: **µg/L** Analysis Date: **1/30/2009 10:19 AM**

Client ID: Run ID: **VOA2_090130A** SeqNo: **1592705** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1-Dichloroethane	50.2	5.0	50	0	100	76-120	0			
1,1-Dichloroethene	52.91	5.0	50	0	106	73-124	0			
1,2-Dichloroethane	52.28	5.0	50	0	105	78-120	0			
cis-1,2-Dichloroethene	49.67	5.0	50	0	99.3	78-120	0			
Tetrachloroethene	51.04	5.0	50	0	102	79-120	0			
Trichloroethene	51.24	5.0	50	0	102	80-120	0			
Vinyl chloride	51.35	2.0	50	0	103	70-127	0			
Surr: 1,2-Dichloroethane-d4	50.32	5.0	50	0	101	70-125	0			
Surr: 4-Bromofluorobenzene	49.8	5.0	50	0	99.6	72-125	0			
Surr: Dibromofluoromethane	50.5	5.0	50	0	101	71-125	0			
Surr: Toluene-d8	48.69	5.0	50	0	97.4	75-125	0			

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: 0901558
 Project: Former Cameron Iron Works 1st Qtr. 2009

QC BATCH REPORT

Batch ID: **R72915** Instrument ID **VOA2** Method: **SW8260**

MS		Sample ID: 0901495-09AMS			Units: µg/L			Analysis Date: 1/30/2009 12:44 PM		
Client ID:		Run ID: VOA2_090130A			SeqNo: 1592710		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	49.22	5.0	50	0	98.4	76-120	0			
1,1-Dichloroethene	47.22	5.0	50	0	94.4	73-124	0			
1,2-Dichloroethane	53.06	5.0	50	0	106	78-120	0			
cis-1,2-Dichloroethene	47.65	5.0	50	0	95.3	78-120	0			
Tetrachloroethene	45.14	5.0	50	0	90.3	79-120	0			
Trichloroethene	46.83	5.0	50	0	93.7	80-120	0			
Vinyl chloride	43.45	2.0	50	0	86.9	70-127	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	53.93	5.0	50	0	108	70-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	51.06	5.0	50	0	102	72-125	0			
<i>Surr: Dibromofluoromethane</i>	52.71	5.0	50	0	105	71-125	0			
<i>Surr: Toluene-d8</i>	48.92	5.0	50	0	97.8	75-125	0			

MSD		Sample ID: 0901495-09AMSD			Units: µg/L			Analysis Date: 1/30/2009 01:09 PM		
Client ID:		Run ID: VOA2_090130A			SeqNo: 1592711		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	49.5	5.0	50	0	99	76-120	49.22	0.557	20	
1,1-Dichloroethene	49.04	5.0	50	0	98.1	73-124	47.22	3.78	20	
1,2-Dichloroethane	53.57	5.0	50	0	107	78-120	53.06	0.955	20	
cis-1,2-Dichloroethene	47.03	5.0	50	0	94.1	78-120	47.65	1.29	20	
Tetrachloroethene	46.03	5.0	50	0	92.1	79-120	45.14	1.93	20	
Trichloroethene	48.78	5.0	50	0	97.6	80-120	46.83	4.07	20	
Vinyl chloride	46.95	2.0	50	0	93.9	70-127	43.45	7.74	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	52.29	5.0	50	0	105	70-125	53.93	3.1	20	
<i>Surr: 4-Bromofluorobenzene</i>	49.74	5.0	50	0	99.5	72-125	51.06	2.62	20	
<i>Surr: Dibromofluoromethane</i>	51.5	5.0	50	0	103	71-125	52.71	2.33	20	
<i>Surr: Toluene-d8</i>	48.02	5.0	50	0	96	75-125	48.92	1.86	20	

The following samples were analyzed in this batch:

0901558-01A	0901558-02A	0901558-03A
0901558-04A	0901558-05A	0901558-06A

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

Lora Terrill

From: Scott Himes [Scott.Himes@erm.com]
Sent: Friday, January 30, 2009 8:47 AM
To: Lora Terrill
Subject: RE: 0901558 Former Cameron Iron Works 1st Qtr. 2009 Ack

Lora, will you please remove the trip blank from analysis. We decided not to analyze it. The rest are good to go.

Scott Himes
ERM

From: Lora Terrill [mailto:Lora.Terrill@ALSEnviro.com]
Sent: Friday, January 30, 2009 8:31 AM
To: Scott Himes
Subject: 0901558 Former Cameron Iron Works 1st Qtr. 2009 Ack

Lora Terrill
ALS Laboratory Group
10450 Stancliff Rd, Suite 210
Houston, TX 77099
Phone: 281-530-5656
Fax: 281-530-3053
www.alsglobal.com <<http://www.alsglobal.com/>>

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ALS Laboratory Group

Sample Receipt Checklist

Client Name: ERMSW-HOU

Date/Time Received: 1/29/2009 15:15

Work Order Number 0901558

Received by: RSZ

Checklist completed by

[Handwritten Signature] → 1-29-09
Signature Date

Reviewed by

Initials LT | 1/30/09
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): 2.6c 002
- Cooler(s)/Kil(s): 1245
- 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:

Client contacted:

Date contacted:

Person contacted:


Contacted by:

Regarding:

Comments:

Corrective Action:

0901558

	ALS Laboratory Group
	10450 Stancliff Rd., Suite 210
	Houston, Texas 77099
	Tel. +1 281 530 5656 Fax. +1 281 530 5887

Date:
Name:
Company:

CUSTODY SEAL	
Date: <u>1-29-09</u>	Time: <u>1445</u>
Name: <u>Arlet</u>	Company: <u>ERM</u>

Seal Broken By: <u>B</u>
Date: <u>1-29-09</u>

Attachment 2-2

Data Usability Summary First Quarter 2009 Ground Water Monitoring Event

Former Cameron Iron Works Facility
Houston, Texas

Environmental Resources Management (ERM) reviewed a laboratory analytical data package (0902235) from ALS Laboratory Group of Houston, Texas (the laboratory) for the analysis of one ground water sample collected on February 9, 2009 south of the Former Cameron Iron Works Site in Houston, Texas (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: Quarterly sampling event to monitor select VOCs downgradient of the facility as a response actions triggered by the October 2008 results.

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

Analysis requested included:

SW-846 8260B – Volatile Organic Compounds (VOCs) 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 for analysis. The sample was analyzed for seven volatile organic compounds (1,1-dichloroethene, 1,1-dichloroethane, 1,2-dichloroethane, cis-1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride). Rinsate, trip, equipment and field blanks were not provided to the laboratory for analysis. Table 2-2-1 lists the sample identification cross-referenced to laboratory identification.

DATA REVIEW/ VALIDATION RESULTS

Analytical Results

Sample data is reported in mg/L for the ground water sample. *Not Detected* results are reported as less than the value of the sample detection limit (SDL) as defined by the TRRP rule. Sample detection limits (SDLs) 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. The sample receipt temperature was within the acceptance criteria of 4 ± 2 °C. The sample was preserved in the field as specified in SW-846 Table 4-1. The sample was prepared and analyzed within holding times as specified in SW-846 Table 4-1.

Calibrations and Tunes

Initial and continuing calibration verification was within method acceptance limits for VOC. The LRC also documents satisfactory instrument performance calibrations (GC/MS tunes) for VOC analyses.

Blanks

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

Internal Standards and Surrogate Recoveries

VOC sample surrogate recoveries were within the laboratory defined acceptance limits, and according to the LRC, the internal standards were within method-required limits.

Laboratory Control Samples

The laboratory control sample/laboratory control sample duplicates (LCS/LCSD) recoveries met the laboratory defined acceptance limits for VOCs.

Matrix Spike/Matrix Spike Duplicates

VOC analysis batch R72915 matrix spike/matrix spike duplicate (MS/MSD) was not project related; therefore an assessment was not performed.

Field Precision

No field duplicate samples were collected and analyzed in this laboratory package.

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 analytical data are useable for the purpose of providing current data on concentrations of chemicals of concern (COCs) in the ground water downgradient of the Former Cameron Iron Works Facility.

TABLE 2-2-1

Cross Reference Field Sample Identifications and Laboratory Identifications
First Quarter 2009 Ground Water Monitoring Event

Former Cameron Iron Works Facility
Houston, Texas

Field ID	Laboratory ID
MW-171	0902235-01



Environmental Division

20-Feb-09

Scott Himes
ERM Southwest, Inc.
15810 Park Ten Place
Suite 300
Houston, TX 77084

Tel: (281) 600-1149
Fax: (281) 600-1001

Re: Cameron Iron Works

Work Order : **0902235**

Dear Scott,

ALS Laboratory Group received 1 sample on 2/9/2009 12:55 PM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Laboratory Group 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 ALS Laboratory Group. 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,

Electronically approved by: Glenda H. Ramos

Lora Terrill
VP Lab Operations



Certificate No: T104704231-08-TX

ALS Group USA, Corp.

Part of the **ALS Laboratory Group**

10450 Stancliff Rd, Suite 210 Houston, Texas 77099-4338

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A Campbell Brothers Limited Company

Client: ERM Southwest, Inc.
Project: Cameron Iron Works
Work Order: 0902235

**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.

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 labor in the attached exception reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed 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 sign the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this c package and is by signature affirming the above release statement is true.



Lora Terrill

VP Lab Operations

Laboratory Review Checklist: Reportable Data							
Laboratory Name: ALS Laboratory Group				LRC Date: 02/20/2009			
Project Name: CAMERON IRON WORKS				Laboratory Job Number: 0902235			
Reviewer Name: Lora Terrill				Prep Batch Number(s): R73483			
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI	CHAIN-OF-CUSTODY (C-O-C)					
		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	SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION					
		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	TEST REPORTS					
		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	SURROGATE RECOVERY DATA					
		1) Were surrogates added prior to extraction?	X				
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?	X				
R5	OI	TEST REPORTS/SUMMARY FORMS FOR BLANK SAMPLES					
		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	LABORATORY CONTROL SAMPLES (LCS):					
		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	MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA					
		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				
R8	OI	ANALYTICAL DUPLICATE DATA					
		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	METHOD QUANTITATION LIMITS (MQLS):					
		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	OTHER PROBLEMS/ANOMALIES					
		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: ALS Laboratory Group			LRC Date: 02/20/2009				
Project Name: CAMERON IRON WORKS			Laboratory Job Number: 0902235				
Reviewer Name: Lora Terrill			Prep Batch Number(s): R73483				
# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S1	OI	INITIAL CALIBRATION (ICAL)					
		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	INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICCV AND CCV) AND					
		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	MASS SPECTRAL TUNING:					
		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	INTERNAL STANDARDS (IS):					
		Were IS area counts and retention times within the method-required QC limits?	X				
S5	OI	RAW DATA (NELAC SECTION 1 APPENDIX A GLOSSARY, AND SECTION 5.12 OR					
		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	DUAL COLUMN CONFIRMATION					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	TENTATIVELY IDENTIFIED COMPOUNDS (TICS):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	INTERFERENCE CHECK SAMPLE (ICS) RESULTS:					
		Were percent recoveries within method QC limits?			X		
S9	I	SERIAL DILUTIONS, POST DIGESTION SPIKES, AND METHOD OF STANDARD					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		
S10	OI	PROFICIENCY TEST REPORTS:					
		Are proficiency testing or inter-laboratory comparison results on file?	X				
S11	OI	METHOD DETECTION LIMIT (MDL) STUDIES					
		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	STANDARDS DOCUMENTATION					
		Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	COMPOUND/ANALYTE IDENTIFICATION PROCEDURES					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	DEMONSTRATION OF ANALYST COMPETENCY (DOC)					
		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	VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS					
		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	LABORATORY STANDARD OPERATING PROCEDURES (SOPS):					
		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).

Laboratory Review Checklist: Exception Report	
Laboratory Name: ALS Laboratory Group	LRC Date: 02/20/2009
Project Name: CAMERON IRON WORKS	Laboratory Job Number: 0902235
Reviewer Name: Lora Terrill	Prep Batch Number(s): R73483
ER #¹	DESCRIPTION
	No Exceptions.

- 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: Cameron Iron Works
Work Order: 0902235

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>
0902235-01	MW-171	Water		2/9/2009 11:50	2/9/2009 12:55	<input type="checkbox"/>

ALS Laboratory Group

Date: 20-Feb-09

Client: ERM Southwest, Inc.
 Project: Cameron Iron Works
 Sample ID: MW-171
 Collection Date: 2/9/2009 11:50 AM

Work Order: 0902235
 Lab ID: 0902235-01
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
TCL VOLATILES			Method: SW8260				Analyst: PC
1,1-Dichloroethane	0.0016	J	0.00050	0.0050	mg/L	1	2/16/2009
1,1-Dichloroethene	0.0014	J	0.00050	0.0050	mg/L	1	2/16/2009
1,2-Dichloroethane	U		0.00050	0.0050	mg/L	1	2/16/2009
cis-1,2-Dichloroethene	0.0011	J	0.00050	0.0050	mg/L	1	2/16/2009
Tetrachloroethene	U		0.00060	0.0050	mg/L	1	2/16/2009
Trichloroethene	U		0.00050	0.0050	mg/L	1	2/16/2009
Vinyl chloride	U		0.00050	0.0020	mg/L	1	2/16/2009
Surr: 1,2-Dichloroethane-d4	101			70-125	%REC	1	2/16/2009
Surr: 4-Bromofluorobenzene	101			72-125	%REC	1	2/16/2009
Surr: Dibromofluoromethane	98.6			71-125	%REC	1	2/16/2009
Surr: Toluene-d8	99.3			75-125	%REC	1	2/16/2009

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
 a - Not accredited n - Not offered for accreditation

WorkOrder: 0902235
Test Code: 8260_TCL_W
Test Number: SW8260
Test Name: TCL Volatiles

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	MDL	Unadjusted MQL
A	1,1-Dichloroethane	75-34-3	0.0005	0.005
A	1,1-Dichloroethene	75-35-4	0.0005	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	0.0006	0.005
A	Trichloroethene	79-01-6	0.0005	0.005
A	Vinyl chloride	75-01-4	0.0005	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

ALS Laboratory Group

Date: 20-Feb-09

Client: ERM Southwest, Inc.
 Work Order: 0902235
 Project: Cameron Iron Works

QC BATCH REPORT

Batch ID: R73483 Instrument ID VOA2 Method: SW8260

MBLK		Sample ID: VBLKW-021609-R73483				Units: µg/L		Analysis Date: 2/16/2009 11:30 AM			
Client ID:		Run ID: VOA2_090216A				SeqNo: 1603701		Prep Date:		DF: 1	
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									
Surr: 1,2-Dichloroethane-d4	52.03	5.0	50	0	104	70-125	0				
Surr: 4-Bromofluorobenzene	50.38	5.0	50	0	101	72-125	0				
Surr: Dibromofluoromethane	50.55	5.0	50	0	101	71-125	0				
Surr: Toluene-d8	49.96	5.0	50	0	99.9	75-125	0				

LCS		Sample ID: VLCSW-021609-R73483				Units: µg/L		Analysis Date: 2/16/2009 10:42 AM			
Client ID:		Run ID: VOA2_090216A				SeqNo: 1603700		Prep Date:		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1-Dichloroethane	50.75	5.0	50	0	101	76-120	0				
1,1-Dichloroethene	50.11	5.0	50	0	100	73-124	0				
1,2-Dichloroethane	48.87	5.0	50	0	97.7	78-120	0				
cis-1,2-Dichloroethene	51.24	5.0	50	0	102	78-120	0				
Tetrachloroethene	48.4	5.0	50	0	96.8	79-120	0				
Trichloroethene	49.51	5.0	50	0	99	80-120	0				
Vinyl chloride	50.96	2.0	50	0	102	70-127	0				
Surr: 1,2-Dichloroethane-d4	50.3	5.0	50	0	101	70-125	0				
Surr: 4-Bromofluorobenzene	51.54	5.0	50	0	103	72-125	0				
Surr: Dibromofluoromethane	50.13	5.0	50	0	100	71-125	0				
Surr: Toluene-d8	49.66	5.0	50	0	99.3	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: 0902235
 Project: Cameron Iron Works

QC BATCH REPORT

Batch ID: **R73483** Instrument ID **VOA2** Method: **SW8260**

MS		Sample ID: 0902311-01AMS			Units: µg/L			Analysis Date: 2/16/2009 02:21 PM		
Client ID:		Run ID: VOA2_090216A			SeqNo: 1603706		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	49	5.0	50	0	98	76-120	0			
1,1-Dichloroethene	46.55	5.0	50	0	93.1	73-124	0			
1,2-Dichloroethane	48.71	5.0	50	0	97.4	78-120	0			
cis-1,2-Dichloroethene	51.75	5.0	50	1.302	101	78-120	0			
Tetrachloroethene	41.41	5.0	50	0	82.8	79-120	0			
Trichloroethene	45.98	5.0	50	0	92	80-120	0			
Vinyl chloride	79.84	2.0	50	35.02	89.6	70-127	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	49.96	5.0	50	0	99.9	70-125	0			
<i>Surr: 4-Bromofluorobenzene</i>	50.49	5.0	50	0	101	72-125	0			
<i>Surr: Dibromofluoromethane</i>	51.18	5.0	50	0	102	71-125	0			
<i>Surr: Toluene-d8</i>	49.76	5.0	50	0	99.5	75-125	0			

MSD		Sample ID: 0902311-01AMSD			Units: µg/L			Analysis Date: 2/16/2009 02:45 PM		
Client ID:		Run ID: VOA2_090216A			SeqNo: 1603707		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	52.54	5.0	50	0	105	76-120	49	6.98	20	
1,1-Dichloroethene	51.08	5.0	50	0	102	73-124	46.55	9.27	20	
1,2-Dichloroethane	52.05	5.0	50	0	104	78-120	48.71	6.61	20	
cis-1,2-Dichloroethene	54.01	5.0	50	1.302	105	78-120	51.75	4.27	20	
Tetrachloroethene	46.37	5.0	50	0	92.7	79-120	41.41	11.3	20	
Trichloroethene	49.37	5.0	50	0	98.7	80-120	45.98	7.11	20	
Vinyl chloride	83.18	2.0	50	35.02	96.3	70-127	79.84	4.11	20	
<i>Surr: 1,2-Dichloroethane-d4</i>	49.48	5.0	50	0	99	70-125	49.96	0.977	20	
<i>Surr: 4-Bromofluorobenzene</i>	50.24	5.0	50	0	100	72-125	50.49	0.494	20	
<i>Surr: Dibromofluoromethane</i>	51.06	5.0	50	0	102	71-125	51.18	0.234	20	
<i>Surr: Toluene-d8</i>	49.7	5.0	50	0	99.4	75-125	49.76	0.106	20	

The following samples were analyzed in this batch: 0902235-01A

- 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



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Page 1 of 1

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Tel: +1 616 399 6070
Fax: +1 616 399 6185

Customer Information				Project Information				ALS Project Manager: <u>ALS Work Order #: 102235</u>											
Purchase Order				Project Name				Parameter/Method Request for Analysis											
Work Order				Project Number				<u>VOC. (8260) List B</u>											
Company Name				Bill To Company															
Send Report To				Invoice Attn															
Address				Address															
City/State/Zip				City/State/Zip															
Phone				Phone															
Fax				Fax															
e-Mail Address				e-Mail Address															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	MW-171	2/9/09	1150	H2O	HCL	3													
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Sampler(s) Please Print & Sign: James Kayatz 2 James Roper
 Relinquished by: James Kayatz 2 James Roper
 Date: 2/9/09 Time: 1255
 Relinquished by: James Kayatz 2 James Roper
 Date: 2/9/09 Time: 1255
 Logged by (Laboratory): _____
 Date: _____ Time: _____
 Relinquished by: _____
 Date: _____ Time: _____
 Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₃ 7-Other 8-4°C 9-5035

Shipments Method: Drop Off
 Received by: [Signature]
 Date: 2/9/09 Time: 1255
 Relinquished by: [Signature]
 Date: 2/9/09 Time: 1255
 Logged by (Laboratory): _____
 Date: _____ Time: _____
 Relinquished by: _____
 Date: _____ Time: _____
 Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₃ 7-Other 8-4°C 9-5035

QC Package: (Check One Box Below)
 Level II Std QC TRRP Checklist
 Level III Std QC/Raw Date TRRP Level IV
 Level IV SW846/CLP Other _____

Notes:
 Cooler Temp _____
 Cooler ID _____
 Required Turnaround Time: (Check Box)
 Other _____
 STD 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour

Results Due Date: _____

Copyright 2008 by ALS Laboratory Group.

Note: 1. Any changes must be made in writing once samples and COC form have been submitted to ALS Laboratory Group.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Laboratory Group are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Laboratory Group

Sample Receipt Checklist

Client Name ERMSW-HOU

Date/Time Received: 2/9/2009 12:55

Work Order Number 0902235

Received by: RNG

Checklist completed by


Signature

2/9/09
Date

Reviewed by

Initials



Date

2/10/09

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) 2.4c 002
- Cooler(s)/Kit(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:

Client contacted:

Date contacted:

Person contacted:

Contacted by:

Regarding:

Comments:

Corrective Action