DHL
ANALYTICAL

July 31, 2001

Scott Pierson
Parsons Engineering Science, Inc.
8000 Centre Park
Suite 200
Austin, Texas 78754
TEL: (512) 719-6000
FAX (512) 719-6099

RE: CSSA Order No.: 0107079

Dear Scott Pierson,

DHL Analytical received 2 samples on 7/26/01 for the analyses presented in the following report.

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

John DuPont
QA Manager

CC:

DHL

CHAIN OF COUSTODY RECORD

PARSONS ENGINEERING SCIENCE, INC.
8000 CENTRE PARK DRIVE SUITE 200
AUSTIN, TEXAS 78754
(512) 719 6000

PROJECT NAME/LOCATION: CSSA Well 16

PROJECT NUMBER: PES# 729487.03

CARRIER: [ ] Federal Express [ ] UPS Other: hand delivery

AIRBILL OR CARRIER ID #: NA

SAMPLER(S): Eric Tennyson

Signature: [signature]

PRESERVATIVE: HCL

ANALYSIS REQUIRED: VOCs

Date	Time	Sample ID/Desc.	Sample Type	Matrix	Sampling Method	Begin Depth	End Depth	Number of Containers	VOCs	REMARKS
7-25-01	1700	Well No. 16-01	N	WG	WF			3	✓	24 hr TAT
7-25-01	1705	Well No. 16-02	N	WG	WF			3	✓	

Expect up to 100 ppb TCE in sample 16-01

Relinquished by	Date	Time	Received by	Date	Time
[signature]	7-25-01	1830	[signature]	7-25-01	1830
			[signature]	7/26/01	8:30

White: laboratory returns with data. Yellow: laboratory copy. Pink: sampler copy

Temp 2.9°C
Hand delivered

DHL Analytical

Date: *31-Jul-01*

CLIENT:	Parsons Engineering Science, Inc.	**Client Sample ID:**	Well No.16-01
Project Name:	CSSA	**Lab ID:**	0107079-01A
Project No:	PES#728487.03	**Collection Date:**	7/25/01 5:00:00 PM
Lab Order:	0107079	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**					Analyst: MLG
1,1-Dichloroethene	ND	0.2	1.00		µg/L	1	7/26/01 12:46:00 PM
1,2-Dichloroethane	ND	0.4	1.00		µg/L	1	7/26/01 12:46:00 PM
cis-1,2-Dichloroethene	146	0.2	1.00		µg/L	1	7/26/01 12:46:00 PM
Tetrachloroethene	141	0.4	1.00		µg/L	1	7/26/01 12:46:00 PM
trans-1,2-Dichloroethene	ND	0.2	1.00		µg/L	1	7/26/01 12:46:00 PM
Trichloroethene	167	0.4	1.00		µg/L	1	7/26/01 12:46:00 PM
Vinyl chloride	ND	0.1	1.00		µg/L	1	7/26/01 12:46:00 PM

Qualifiers:

ND - Not Detected at the Method Detection Limit

J - Analyte detected between the MDL and the RL

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

C - Sample result or QC discussed in the Case Narrative

E - Value above quantitation range

DHL Analytical

Date: *31-Jul-01*

CLIENT:	Parsons Engineering Science, Inc.	**Client Sample ID:**	Well No.16-02
Project Name:	CSSA	**Lab ID:**	0107079-02A
Project No:	PES#728487.03	**Collection Date:**	7/25/01 5:05:00 PM
Lab Order:	0107079	**Matrix:**	AQUEOUS

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
VOLATILES BY GC/MS		**SW8260B**					Analyst: MLG
1,1-Dichloroethene	ND	0.2	1.00		µg/L	1	7/26/01 1:17:00 PM
1,2-Dichloroethane	ND	0.4	1.00		µg/L	1	7/26/01 1:17:00 PM
cis-1,2-Dichloroethene	ND	0.2	1.00		µg/L	1	7/26/01 1:17:00 PM
Tetrachloroethene	ND	0.4	1.00		µg/L	1	7/26/01 1:17:00 PM
trans-1,2-Dichloroethene	ND	0.2	1.00		µg/L	1	7/26/01 1:17:00 PM
Trichloroethene	ND	0.4	1.00		µg/L	1	7/26/01 1:17:00 PM
Vinyl chloride	ND	0.1	1.00		µg/L	1	7/26/01 1:17:00 PM

Qualifiers:

ND - Not Detected at the Method Detection Limit

J - Analyte detected between the MDL and the RL

B - Analyte detected in the associated Method Blank

* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits

C - Sample result or QC discussed in the Case Narrative

E - Value above quantitation range

DHL Analytical

Date: *31-Jul-01*

CLIENT: Parsons Engineering Science. Inc.
Project: CSSA
Lab Order: 0107079

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objectives except where noted in the following. For Volatile analysis by method8260B the LCS was below control limits for 1,1-Dichloroethene and trans-1,2-Dichloroethene. These are flagged accordingly in the enclosed QC summary report. The "S" flag denotes spike recovery was outside control limits. The samples were below detection limits for these compounds. No further corrective actions were required and no sample results were adversely affected.

DHL Analytical

Sample Receipt Checklist

Client Name CSSA

Date and Time Receive 7/26/01

Work Order Number 0107079

Received by MKS

Checklist completed by _____ Signature _____ Date

Reviewed by JD Initials 7/26/01 Date

Matrix:

Carrier name: Hand Delivered

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping 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 ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐
Water - pH acceptable upon recipt?	Yes ☐	No ☐	NotApplicable ☑

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section be

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Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding: _____

Comments: _____

_____

_____

Corrective Action _____

_____

_____

DHL Analytical

Date: *31-Jul-01*

CLIENT: Parsons Engineering Science, Inc.
Work Order: 0107079
Project: CSSA

QC SUMMARY REPORT
Method Blank

Sample ID: **MB-8480** Batch ID: **8480** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS5_010726A** Analysis Date: **7/26/01 12:15:00 PM** Prep Date: **7/26/01**

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	ND	1								
1,2-Dichloroethane	ND	1								
cis-1,2-Dichloroethene	ND	1								
Tetrachloroethene	ND	1								
trans-1,2-Dichlorcethene	ND	1								
Trichloroethene	ND	1								
Vinyl chloride	ND	1								

Qualifiers:
ND - Not Detected at the Method Detection Limit
J - Analyte detected between MDL and RL
S - Spike Recovery outside control limits
R - RPD outside control limits
B - Analyte detected in the associated Method Blank

DHL Analytical

Date: 31-Jul-01

CLIENT: Parsons Engineering Science, Inc.
Work Order: 0107079
Project: CSSA

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID **0107079-02A MS** Batch ID: **8480** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS5_010726A** Analysis Date: **7/26/01 2:20:00 PM** Prep Date **7/26/01**

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	42.33	1	50	0	84.7	75	125			
Trichloroethene	51.17	2	50	0	102	75	125			

Sample ID **0107079-02A MSD** Batch ID: **8480** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS5_010726A** Analysis Date: **7/26/01 2:51:00 PM** Prep Date **7/26/01**

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	38.73	1	50	0	77.5	75	125	8.88	20	
Trichloroethene	45.96	2	50	0	91.9	75	125	10.7	20	

Qualifiers:

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J - Analyte detected between MDL and RL
S - Spike Recovery outside control limits
R - RPD outside control limits
B - Analyte detected in the associated Method Blank

DHL Analytical

Date: *31-Jul-01*

CLIENT: Parsons Engineering Science, Inc.
Work Order: 0107079
Project: CSSA

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID: **LCS-8480** Batch ID: **8480** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS5_010726A** Analysis Date: **7/26/01 10:43:00 AM** Prep Date: **7/26/01**

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	34.17	1	50	0	68.3	75	125			S
1,2-Dichloroethane	46.5	1	50	0	93	75	125			
cis-1,2-Dichloroethene	50.05	1	50	0	100	75	125			
Tetrachloroethene	42.49	1	50	0	85	75	125			
trans-1,2-Dichloroethene	34.17	1	50	0	68.3	75	125			S
Trichloroethene	47.48	1	50	0	95	75	125			
Vinyl chloride	51.77	1	50	0	104	75	125			

Qualifiers:
ND - Not Detected at the Method Detection Limit
J - Analyte detected between MDL and RL
S - Spike Recovery outside control limits
R - RPD outside control limits
B - Analyte detected in the associated Method Blank

DHL Analytical

Date: 31-Jul-01

CLIENT: Parsons Engineering Science, Inc.
Work Order: 0107079
Project: CSSA
Test No: SW8260B

QC SUMMARY REPORT
SURROGATE RECOVERIES

Volatiles by GC/MS

Sample ID	BR4FBZ	BZMED8	DBFM	DCA12D4
0107072-14A	98.5	92.9	108	105
0107079-01A	99.0	92.9	106	101
0107079-02A	99.6	93.1	104	98.6
0107079-02A MS	108	93.2	109	105
0107079-02A MSD	107	92.7	105	99.1
0107086-03A	98.8	92.8	108	103
0107086-04A	99.0	93.1	104	105
0107086-05A	98.5	93.6	108	102
0107086-06A	99.8	93.5	107	97.6
0107086-07A	99.7	93.1	104	98.0
0107086-08A	99.4	93.8	104	91.8
0107086-10A	98.5	93.3	105	105
0107086-11A	99.4	93.1	108	106
LCS-8480	97.6	93.1	102	95.0
MB-8480	99.3	93.2	103	97.2

Acronym		Surrogate	QC Limits
BR4FBZ	=	4-Bromofluorobenzene	75-125
BZMED8	=	Toluene-d8	75-125
DBFM	=	Dibromofluoromethane	75-125
DCA12D4	=	1,2-Dichloroethane-d4	62-139

*** Surrogate recovery outside acceptance limits**

DHL Analytical

Date: *31-Jul-01*

CLIENT: Parsons Engineering Science, Inc.
Work Order: 0107079
Project: CSSA

QC SUMMARY REPORT
Initial Calibration Verification Standard

Sample ID: **ICV-010726** Batch ID: **R8805** Test Code: **SW8260B** Units: **µg/L**
Run ID: **GCMS5_010726A** Analysis Date: **7/26/01 9:42:00 AM** Prep Date:

Analyte	Result	RL	SPK value	SPK Ref	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	48.17	1	50	0	96.3	75	125			
1,2-Dichloroethane	50.31	1	50	0	101	75	125			
cis-1,2-Dichloroethene	55.27	1	50	0	111	75	125			
Tetrachloroethene	50.02	1	50	0	100	75	125			
trans-1,2-Dichloroethene	48.17	1	50	0	96.3	75	125			
Trichloroethene	54.9	1	50	0	110	75	125			
Vinyl chloride	52.07	1	50	0	104	75	125			

Qualifiers:
ND - Not Detected at the Method Detection Limit
J - Analyte detected between MDL and RL
S - Spike Recovery outside control limits
R - RPD outside control limits
B - Analyte detected in the associated Method Blank