



Case Narrative

02/11/2011

Curtis Franklin
DSE, Inc.
3902 Industrial St., Suite A
Rowlett, TX 75088

RE: QC failed on one compound

Two air canisters were submitted to GD Air Testing, Inc. for the analysis of VOCs and H₂S by EPA Method TO14 and ASTM 1946; respectively.

The QC that was run along with these samples had Toluene outside of the required criteria limit both in the BS and the BSD. Re-run of the QC did not improve the recovery for toluene. Because toluene was detected in each of the samples, it was J coded due to the failing QC.

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

Sincerely,

Dr. George Dai
GD Air Testing Inc.
Lab Director



CLIENT: Curtis Franklin
Dougherty Sprague Env., Inc.
3902 Industrial St. Suite A
Rowlett, TX 75088

GD Air Testing Lab. ID: GD11-0011-001
Report Date: 11-Feb-11
Date Analyzed: 28-Jan-11
Analyzed by: LAJ
GD Air QC Batch: QC-012811TO14
Method: EPATO14
NELAP Certification #: T104704364

Project No.: 1038000

REPORT OF ANALYTICAL RESULTS

Table with columns: SAMPLE DESCRIPTION, MATRIX, SAMPLE BY, SAMPLED DATE /RECEIVED, MW, CAS, PQL*, RESULT, NOTE. Rows include various chemical constituents like Benzene, Chloroethane, and Toluene with their respective analytical data.



CLIENT: Curtis Franklin
Dougherty Sprague Env., Inc.
3902 Industrial St. Suite A
Rowlett, TX 75088

GD Air Testing Lab. ID: GD11-0011-001
Report Date: 11-Feb-11
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GD Air QC Batch: QC-012811TO14
Method: EPATO14
NELAP Certification #: T104704364

Project No.: 1038000

REPORT OF ANALYTICAL RESULTS

Table with columns: SAMPLE DESCRIPTION, MATRIX, SAMPLE BY, SAMPLED DATE /RECEIVED, MW, CAS, PQL*, RESULT, NOTE. Includes rows for Trichlorofluoromethane, Trichlorotrifluoroethane, Vinyl Chloride, m&p-Xylenes, o-Xylene, and Surrogate Recovery Report.

*Comparison with the method blank this sample run with a dilution factor of: 1.13
J: Estimated value, see case narrative.
Canister #62039 was received at an initial pressure of 0.0psi and pressurized to 4.4psi.
N: Not in the Scope of NELAC Accrediation. Instrument calibration not performed for this analyte.
Analyte determined as tentatively identified compound (TIC).
*RESULTS Listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit).
* The control limit for Surrogate Recovery % of all spiked compound is 70% - 130%. Only one is required to pass.
*Concentrations in ug/cu M reported at 760 mm Hg pressure and 298 deg.K.
*QA/QC reports followed this report include: Method blank, Blank spike (BS) and Blank spike duplicate (BSD)

Respectfully submitted
GD Air Testing, Inc.
AJ for Dr. Dai
George Dai, Ph.D.
Laboratory Director
Data File:varian/110128/110128-23-0011-1.sms
Report File: GDAIR D:\Client-Report\GD11-0011-1



CLIENT: **Curtis Franklin**
DSE, Inc.
3902 Industrial St., Suite A
Rowlett, TX 75088

GD Air Testing Lab. ID: **GD11-0011-1H2S**
Report Date: **2/14/2011**
Date Analyzed: **2/10/2011**
Analyzed by: **JCA**
GD QC Batch: **QC-021011H2S**

Project No.: **1038000**

Method: **ASTM 1946**

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE /RECEIVED	
Sample #1-RW01281103	Air	Charlotte S.	01/28/11	01/28/11

CONSTITUENT	MW	PQL*	RESULT	NOTE
		ppmv	ppmv	
Hydrogen Sulfide	34.0	325	ND	S

S: Not in the Scope of NELAC Accreditation. Constituent analyzed using ASTM 1946.
Comparison with the method blank this sample run with a dilution factor of: **1.3**
RESULTS listed as "ND" were not detected at or above the listed PQL (Practical Quantitation Limit).
QA/QC reports following this report include: Method Blank, Blank Spike (BS), and Blank Spike Duplicate (BSD).

Respectfully submitted
GD Air Testing, Inc.

AJ for Dr. Dai
George Dai, Ph.D.
Laboratory Director

Report File: GDAIR D:\Client_Report\gd11-0011-1H2S
Data File: C:\HPCHEM\1\DATA\110210\S1021005.D



CLIENT: **Curtis Franklin**
Dougherty Sprague Env., Inc.
3902 Industrial St. Suite A
Rowlett, TX 75088

GD Air Testing Lab. ID: **GD11-0011-002**
Report Date: **11-Feb-11**
Date Analyzed: **28-Jan-11**
Analyzed by: **LAJ**
GD Air QC Batch: **QC-012811TO14**
Method: **EPATO14**
NELAP Certification #: **T104704364**

Project No.: **1038000**

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLE BY	SAMPLED DATE /RECEIVED		NOTE	
			01/28/11	01/28/11		
Sample #1-RW01281104	Air	Charlotte S.				
CONSTITUENT	MW	CAS	PQL* ppbv	RESULT ppbv	ug/cu M	
Benzene	78	71432	0.2	2.34	7.47	
Benzylchloride	126.6	100447	0.2	ND	ND	N
Bromomethane (Methyl Bromide)	94.9	74839	0.2	ND	ND	
Carbon tetrachloride	153.8	56235	0.2	ND	ND	
Chlorobenzene	112.6	108907	0.2	ND	ND	
Chloroethane (Ethyl Chloride)	64.5	75003	0.2	ND	ND	
Chloroform	119	67663	0.2	ND	ND	
Chloromethane (Methyl Chloride)	50.4	74873	0.2	1.03	2.12	
1,2-Dibromoethane (EDB)	187.9	106934	0.2	ND	ND	
1,2-Dichlorobenzene	147	95501	0.2	ND	ND	
1,3-Dichlorobenzene	147	541731	0.2	ND	ND	
1,4-Dichlorobenzene	147	106467	0.2	ND	ND	
1,1-Dichloroethane	99	74343	0.2	ND	ND	
1,1-Dichloroethene	97	75354	0.2	ND	ND	
Dichlorodifluoromethane (F12)	120.9	75718	0.2	0.59	2.93	
Dichlorotetrafluoroethane (F114)	170.9	76142	0.2	ND	ND	
1,2-Dichloroethane (EDC)	99	107062	0.2	ND	ND	
cis-1,2-Dichloroethene	97	156592	0.2	ND	ND	
trans-1,2-Dichloroethene	97	156605	0.2	ND	ND	N
Dichloromethane (Methylene chloride)	84.9	75092	0.2	0.27	0.95	
1,2-Dichloropropane	113	78875	0.2	ND	ND	
cis-1,3-Dichloropropene	111	10061015	0.2	ND	ND	
trans-1,3-Dichloropropene	111	10061026	0.2	ND	ND	
Ethylbenzene	106	100414	0.2	0.55	2.40	
Hexachlorobutadiene	260.8	87683	0.4	ND	ND	
Styrene	104	100425	0.2	ND	ND	
1,1,1,2-Tetrachloroethane	167.9	79345	0.2	ND	ND	
Tetrachloroethene (PCE)	165.8	127184	0.2	ND	ND	
Toluene	92	108883	0.2	3.3	12.4	J
1,1,1-Trichloroethane (TCA)	133.4	71556	0.2	ND	ND	
1,1,2-Trichloroethane	133.4	79005	0.2	ND	ND	
1,3,5-Trimethylbenzene	120.2	108678	0.2	ND	ND	
1,2,4-Trimethylbenzene	120.2	95636	0.2	ND	ND	
1,2,4-Trichlorobenzene	181.5	120821	0.5	ND	ND	
Trichloroethene (TCE)	131.3	79016	0.2	ND	ND	



CLIENT: **Curtis Franklin**
Dougherty Sprague Env., Inc.
3902 Industrial St. Suite A
Rowlett, TX 75088

GD Air Testing Lab. ID: **GD11-0011-002**
Report Date: **11-Feb-11**
Date Analyzed: **28-Jan-11**
Analyzed by: **LAJ**
GD Air QC Batch: **QC-012811TO14**
Method: **EPATO14**
NELAP Certification #: **T104704364**

Project No.: **1038000**

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLE BY	SAMPLED DATE /RECEIVED			
Sample #1-RW01281104	Air	Charlotte S.	01/28/11	01/28/11		
CONSTITUENT	MW	CAS	PQL*	RESULT	NOTE	
			ppbv	ppbv	ug/cu M	
Trichlorofluoromethane (F-11)	137.4	75694	0.2	0.27	1.52	
Trichlorotrifluoroethane (F-113)	187.4	76131	0.2	ND	ND	
Vinyl Chloride	62.5	75014	0.2	ND	ND	
m&p-Xylenes	106	1330207	0.2	1.5	6.4	
o-Xylene	106	95476	0.2	0.32	1.4	

Surrogate Recovery Report

			Spiked	Found	R%
			ppbv	ppbv	
1,4-Difluorobenzene (SS1)	118.1	540363	5.00	4.85	97
Bromofluorobenzene (SS2)	175	460004	5.00	4.41	88

*Comparison with the method blank this sample run with a dilution factor of: **1.13**

J: Estimated value, see case narrative.

Canister #2519 was received at an initial pressure of 0.0psi and pressurized to 4.5psi.

N: Not in the Scope of NELAC Accrediation. Instrument calibration not performed for this analyte.

Analyte determined as tentatively identified compound (TIC).

*RESULTS Listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit).

* The control limit for Surrogate Recovery % of all spiked compound is 70% - 130%. Only one is required to pass.

*Concentrations in ug/cu M reported at 760 mm Hg pressure and 298 deg.K.

*QA/QC reports followed this report include: Method blank, Blank spike (BS) and Blank spike duplicate (BSD)

Respectfully submitted

GD Air Testing, Inc.

George Dai, Ph.D.

Laboratory Director

Data File:varian/110128/110128-24-0011-2.sms

Report File: GDAIR D:\Client-Report\GD11-0011-2



CLIENT: **Curtis Franklin**
DSE, Inc.
3902 Industrial St., Suite A
Rowlett, TX 75088

GD Air Testing Lab. ID: **GD11-0011-2H2S**
Report Date: **2/14/2011**
Date Analyzed: **2/10/2011**
Analyzed by: **JCA**
GD QC Batch: **QC-021011H2S**

Project No.: **1038000**

Method: **ASTM 1946**

REPORT OF ANALYTICAL RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE /RECEIVED	
Sample #2-RW01281104	Air	Charlotte S.	01/28/11	01/28/11

CONSTITUENT	MW	PQL* ppmv	RESULT ppmv	NOTE
Hydrogen Sulfide	34.0	325	ND	S

S: Not in the Scope of NELAC Accreditation. Constituent analyzed using ASTM 1946.
Comparison with the method blank this sample run with a dilution factor of: **1.3**
RESULTS listed as "ND" were not detected at or above the listed PQL (Practical Quantitation Limit).
QA/QC reports following this report include: Method Blank, Blank Spike (BS), and Blank Spike Duplicate (BSD).

Respectfully submitted
GD Air Testing, Inc.

George Dai
George Dai, Ph.D.
Laboratory Director

Report File: GDAIR D:\Client_Report\gd11-0011-2H2S
Data File: C:\HPCHEM\1\DATA\110210\S1021007.D



CLIENT: GD Air Testing, Inc.

GD Air Testing Lab. ID:

Method Blank

Report Date:

01/28/11

Date Analyzed:

01/28/11

Analyzed by:

LAJ

GD Air QC Batch:

QC-012811

Project No.:

Method:

EPATO14

NELAP Certification #:

T104704364

REPORT OF METHOD BLANK RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLE BY		SAMPLED DATE /RECEIVED		
BLK	Air					
CONSTITUENT	MW	CAS	PQL*	RESULT	NOTE	
			ppbv	ppbv	ug/cu M	
Benzene	78	71432	0.20	ND	ND	
Benzylchloride	126.6	100447	0.20	ND	ND	N
Bromomethane (Methyl Bromide)	94.9	74839	0.20	ND	ND	
Carbon tetrachloride	153.8	56235	0.20	ND	ND	
Chlorobenzene	112.6	108907	0.20	ND	ND	
Chloroethane (Ethyl Chloride)	64.5	75003	0.20	ND	ND	
Chloroform	119	67663	0.20	ND	ND	
Chloromethane (Methyl Chloride)	50.4	74873	0.20	ND	ND	
1,2-Dibromoethane (EDB)	187.9	106934	0.20	ND	ND	
1,2-Dichlorobenzene	147	95501	0.20	ND	ND	
1,3-Dichlorobenzene	147	541731	0.20	ND	ND	
1,4-Dichlorobenzene	147	106467	0.20	ND	ND	
1,1-Dichloroethane	99	74343	0.20	ND	ND	
1,1-Dichlorethene	97	75354	0.20	ND	ND	
Dichlorodifluoromethane (F12)	120.9	75718	0.20	ND	ND	
Dichlorotetrafluoroethane (F114)	170.9	76142	0.20	ND	ND	
1,2-Dichloroethane (EDC)	99	107062	0.20	ND	ND	
cis-1,2-Dichloroethene	97	156592	0.20	ND	ND	
trans-1,2-Dichloroethene	97	156605	0.20	ND	ND	N
Dichloromethane (Methylene chloride)	84.9	75092	0.20	ND	ND	
1,2-Dichloropropane	113	78875	0.20	ND	ND	
cis-1,3-Dichloropropene	111	10061015	0.20	ND	ND	
trans-1,3-Dichloropropene	111	10061026	0.20	ND	ND	
Ethylbenzene	106	100414	0.20	ND	ND	
Hexachlorobutadiene	260.8	87683	0.30	ND	ND	
Styrene	104	100425	0.20	ND	ND	
1,1,2,2-Tetrachloroethane	167.9	79345	0.20	ND	ND	
Tetrachloroethene (PCE)	165.8	127184	0.20	ND	ND	
Toluene	92	108883	0.20	ND	ND	
1,1,1-Trichloroethane (TCA)	133.4	71556	0.20	ND	ND	
1,1,2-Trichloroethane	133.4	79005	0.20	ND	ND	
1,3,5-Trimethylbenzene/4-Ethyltoluene	120.2	108678	0.20	ND	ND	
1,2,4-Trimethylbenzene	120.2	95636	0.20	ND	ND	
1,2,4-Trichlorobenzene	181.5	120821	0.40	ND	ND	
Trichloroethene (TCE)	131.3	79016	0.20	ND	ND	



CLIENT: GD Air Testing, Inc.

GD Air Testing Lab. ID:

Method Blank

Report Date:

01/28/11

Date Analyzed:

01/28/11

Analyzed by:

LAJ

GD Air QC Batch:

QC-012811

Project No.: QC

Method:

EPATO14

NELAP Certification #:

T104704364

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLE BY		SAMPLED DATE /RECEIVED		
BLK	Air					
CONSTITUENT	MW	CAS	PQL*	RESULT	NOTE	
			ppbv	ppbv	ug/cu M	
Trichlorofluoromethane (F-11)	137.4	75694	0.20	ND	ND	
Trichlorotrifluoroethane (F-113)	187.4	76131	0.20	ND	ND	
Vinyl Chloride	62.5	75014	0.20	ND	ND	
m&p-Xylenes	106	1330207	0.20	ND	ND	
o-Xylene	106	95476	0.20	ND	ND	
Surrogate Recovery Report			Spiked	Found	R%	
			ppbv	ppbv		
1,4-Difluorobenzene (SS1)	118.1	540363	5.00	4.55	91	
Bromofluorobenzene (SS2)	175	460004	5.00	5.49	110	

*Comparison with the method blank this sample run with a dilution factor of:

1.0

N: Not included in the Scope of NELAC Accrediation. Instrument calibration not performed for this analyte.

Analyte determined as tentatively identified compound (TIC).

*RESULTS Listed as 'ND' were not detected at or above the listed PQL (Practical Quantitation Limit).

* The control limit for Surrogate Recovery % of all spiked compound is 70% - 130%. Only one is required to pass.

*Concentrations in ug/cu M reported at 760 mm Hg pressure and 298 deg.K.

*QA/QC reports followed this report include: Method blank, Blank spike (BS) and Blank spike duplicate (BSD)

Respectfully submitted

GD Air Testing, Inc.

George Dai, Ph.D.

Laboratory Director

Data File: c:\Varian\110128-19-blk.sms

Report File: GD SRID\QC-11-TO14\Blank



CLIENT: **GD Air Testing, Inc.**

GD Air Testing Lab. ID: **QC-BLK-021011H2S**

Report Date: 2/14/2011

Date Analyzed: 2/10/2011

Analyzed by: JCA

GD QC Batch: **QC-021011H2S**

NELAP Certification No.: T104704364

Method: **ASTM 1946**

REPORT OF METHOD BLANK RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLED BY	SAMPLED DATE /RECEIVED	
Blank	Air	JCA	02/10/11	02/10/11

CONSTITUENT	MW	PQL*	RESULT	NOTE
		ppmv	ppmv	
Hydrogen Sulfide	34.0	250	ND	

* If any compound is out of control limit, please see the case narrative for more details.

Respectfully submitted

GD Air Testing, Inc.

George Dai, Ph.D.
Laboratory Director

Report File: GDAIR D:\Client_Report\QC-blk-021011-H2S

Data File: C:\HPCHEM\1\DATA\110210\1S1021002.D



CLIENT: GD Air Testing, Inc.

GD Air Testing Lab. ID:

BS/BSD

Report Date:

01/28/11

Date Analyzed:

01/28/11

Project No.:

Analyzed by:

LAJ

GD Air QC Batch:

QC-012811

Method:

EPATO14

NELAP Certification #:

T104704364

REPORT OF BLANK SPIKE RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLE BY	SAMPLED DATE /RECEIVED
BS/BSD	Air		

Spike Control Compounds	Spiked ppbv	Found and Recovery				
		BS/ppbv	BS R%	BSD	BSD R%	% RPD

VOLATILE ORGANICS BY EPA TO-14

Vinyl Chloride	10.0	10.6	106	10.4	104	2
Methylene chloride (Dichloromethane)	10.0	9.8	98	9.4	94	4
1,1,1-Trichloroethane	10.0	10.2	102	9.5	95	7
1,2-Dichloroethane (EDC)	10.0	12.1	121	10.9	109	10
Benzene	10.0	10.1	101	9.1	91	10
Carbon tetrachloride	10.0	9.7	97	9.2	92	6
Trichloroethene (TCE)	10.0	10.1	101	9.3	93	8
Toluene	CN	10.0	16.8	168	169	1
Chlorobenzene	10.0	13.0	130	13.0	130	0
Ethylbenzene	10.0	11.2	112	11.2	112	0
o-Xylene	10.0	9.7	97	9.6	96	1

Surrogate Recovery Report

1,4-Difluorobenzene (SS1)	5.0	4.16	83	3.97	79	4.7
Bromofluorobenzene (SS2)	5.0	4.09	82	3.57	71	13.6

CN: See Case Narrative.

* The control limit for BS Recovery % of all spiked compound is 70% - 130%

* The control limit for relative percentage difference of BS/BSD is 30%

* If any control compound is not within the control limit, please see the case narrative for more details.

* The control limit for Surrogate Recovery % of all spiked compound is 70% - 130%. Only one is required to pass.

Respectfully submitted

GD Air Testing, Inc.

George Dai, Ph.D.

Laboratory Director

Data File: VARIAN\110128-14-bs.sms and 110128-16-bsd.sms

Report File: GD\SRID\QC-TO14\BS-BSD



CLIENT: GD Air Testing Inc. QA

GD Air Testing Lab. ID:

QC-021011H2S

Report Date: 2/14/2011

Date Analyzed: 2/10/2011

Analyzed by: JCA

NELAP Certification No.: T104704364

Method: ASTM 1946

REPORT OF BLANK SPIKE RESULTS

Page 1 of 1

SAMPLE DESCRIPTION	MATRIX	SAMPLE BY		SAMPLED DATE /RECEIVED		
BS/BSD	GAS					
CONSTITUENT	Spiked ppmv	Found and Recovery				NOTE
		BS	BS, R%	BSD	BSD, R%	
Hydrogen Sulfide	1000	1110	111	1140	114	2.7

* The control limit for BS Recovery % of all spiked compound is 70% - 130%

** The control limit for relative percentage difference of BS/BSD is 30%

*** If any control compound is not within the control limit, please see the case narrative for more details.

Respectfully submitted
GD Air Testing, Inc.

George Dai, Ph.D.
Laboratory Director

Data File: C:\HPCHEM\1\DATA\110210\S1021003.D, S1021004.D

Report File: GDAIR D:\Client_Report\H2S-BS-021011F