hart hickman
SMARTER ENVIRONMENTAL SOLUTIONS

Via E-Mail

August 16, 2012

North Carolina Department
of Environment and Natural Resources
1646 Mail Service Center
Raleigh, NC 27699-1646

Attention: Ms. Carolyn Minnich

Re: Results of Groundwater Sampling
1600 Camden Rd.
Charlotte, North Carolina
DENR Brownfields Project No. 07018-03-60
H&H Job No. BHC-108

Dear Carolyn:

Hart & Hickman, PC (H&H) is submitting this letter report to document recent groundwater sampling conducted at the property located at 1600 Camden Rd. in Charlotte. H&H sampled existing monitoring wells MW-1 and MW-2 to satisfy the requirements of the Brownfields Agreement for the site.

The monitoring wells were sampled on July 19, 2012 in general accordance with the guidelines of the North Carolina Department of Environment and Natural Resources (DENR) Inactive Hazardous Sites Branch. Prior to sampling, the depth to water from top of casing was measured in each of the wells. The depth to water was as follows: MW-1 – 6.20 ft; and MW-2 – 5.62 ft. Following measuring depth to water, the wells were purged and field measurements of pH, conductivity, and temperature were completed following each well bore volume. The field parameters stabilized after the removal of three well bore volumes, and samples were then collected for laboratory analysis.

In accordance with the Brownfields Agreement, the groundwater samples were analyzed for volatile organic compounds by EPA Method 8260. Purging and sampling were conducted with new, disposable polyethylene bailers. The results of analyses of the groundwater samples are attached.

Consistent with the two previous sampling events conducted in January 2008 and January 2009, no compounds were detected in either of the groundwater samples. The laboratory analytical data are attached in Appendix A. A summary of the compounds detected in ground water for the four sampling events conducted since execution of the Brownfields Agreement is provided below:

Compound (µg/L)	February 20, 2007	January 25, 2008	January 15, 2009	July 19, 2012
Isopropyl Ether (IPE)	4.26	<1	<1	<1
Tetrachloroethene	2.25	<1	<1	<1
cis-1,2-Dichloroethene	2.20	<1	<1	<1

The Brownfields Agreement indicates that ground water is to be sampled for a minimum of 5 years after execution of the agreement. In the 2009 report, a request was made to the North Carolina Department of Environment and Natural Resources (DENR) discontinue sampling based upon the very low levels detected in 2007 and the lack of compounds detected in 2008 and 2009. However, a response to the 2009 request was not received from DENR. Therefore, DENR requested that another round of sampling be conducted and that another request be made to terminate further sampling under the Brownfields Agreement.

Based upon the low levels of compounds detected in the initial sampling event in 2007 and the fact that no compounds have been detected in the 2008, 2009, and 2012 sampling events, H&H recommends that a request be made to DENR to not conduct additional groundwater sampling at the site and that the monitoring wells be abandoned.

Thank you for your assistance with this project. If you have any questions or need any additional information, please feel free to contact us at 704-586-0007.

Very truly yours,

Hart & Hickman, PC

Steven C. Hart, PG
Principal

cc: Steve Harris
David Peacock - DENR

Attachments

Appendix A

Laboratory Analytical Report

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Tel: (850)474-1001

TestAmerica Job ID: 400-67251-1
TestAmerica Sample Delivery Group: Proj. BHC-108
Client Project/Site: BHC-108 - Charlotte, NC

For:
Hart & Hickman, PC
2923 S Tryon Street
Suite 100
Charlotte, North Carolina 28203

Attn: Steve Hart

Authorized for release by:
7/26/2012 3:13:32 PM

Carolyn Hooper
Project Manager I
carolyn.hooper@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Job ID: 400-67251-1

Laboratory: TestAmerica Pensacola

Narrative

Job Narrative
400-67251-1

Receipt
The samples were received on 7/20/2012 9:06 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The cooler temp at time of receipt was 4.3°C.

GC/MS VOA
No analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

Sample Summary

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
400-67251-1	MW-1	Water	07/19/12 15:35	07/20/12 09:06
400-67251-2	MW-2	Water	07/19/12 15:50	07/20/12 09:06
400-67251-3	Trip Blank	Water	07/20/12 09:06	07/20/12 09:06

Detection Summary

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Client Sample ID: MW-1 — Lab Sample ID: 400-67251-1

No Detections

Client Sample ID: MW-2 — Lab Sample ID: 400-67251-2

No Detections

Client Sample ID: Trip Blank — Lab Sample ID: 400-67251-3

No Detections

Client Sample Results

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Client Sample ID: MW-1

Date Collected: 07/19/12 15:35
Date Received: 07/20/12 09:06

Lab Sample ID: 400-67251-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			07/25/12 23:26	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			07/25/12 23:26	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			07/25/12 23:26	1
1,2,3-Trichloropropane	ND		5.0	0.86	ug/L			07/25/12 23:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			07/25/12 23:26	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			07/25/12 23:26	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.78	ug/L			07/25/12 23:26	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,2-Dichloroethene, Total	ND		10	0.64	ug/L			07/25/12 23:26	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			07/25/12 23:26	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			07/25/12 23:26	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			07/25/12 23:26	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
2-Butanone (MEK)	ND		25	2.6	ug/L			07/25/12 23:26	1
2-Chlorotoluene	ND		1.0	0.57	ug/L			07/25/12 23:26	1
2-Hexanone	ND		25	3.1	ug/L			07/25/12 23:26	1
4-Chlorotoluene	ND		1.0	0.56	ug/L			07/25/12 23:26	1
4-Methyl-2-pentanone (Methyl isobutyl ketone)	ND		25	1.8	ug/L			07/25/12 23:26	1
Acetone	ND		25	3.5	ug/L			07/25/12 23:26	1
Benzene	ND		1.0	0.34	ug/L			07/25/12 23:26	1
Bromobenzene	ND		1.0	0.54	ug/L			07/25/12 23:26	1
Bromochloromethane	ND		1.0	0.52	ug/L			07/25/12 23:26	1
Bromodichloromethane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Bromoform	ND		5.0	0.71	ug/L			07/25/12 23:26	1
Bromomethane	ND		1.0	0.98	ug/L			07/25/12 23:26	1
Carbon disulfide	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Chlorobenzene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Chlorodibromomethane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Chloroethane	ND		1.0	0.76	ug/L			07/25/12 23:26	1
Chloroform	ND		1.0	0.60	ug/L			07/25/12 23:26	1
Chloromethane	ND		1.0	0.83	ug/L			07/25/12 23:26	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/25/12 23:26	1
Dibromomethane	ND		5.0	0.59	ug/L			07/25/12 23:26	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			07/25/12 23:26	1
Diisopropyl ether	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Ethylbenzene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Hexachlorobutadiene	ND	*	5.0	0.90	ug/L			07/25/12 23:26	1
Iodomethane	ND		1.0	0.68	ug/L			07/25/12 23:26	1
Isopropylbenzene	ND		1.0	0.53	ug/L			07/25/12 23:26	1

Client Sample Results

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Client Sample ID: MW-1

Lab Sample ID: 400-67251-1

Date Collected: 07/19/12 15:35
Matrix: Water
Date Received: 07/20/12 09:06

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			07/25/12 23:26	1
Methylene Chloride	ND		1.0	1.0	ug/L			07/25/12 23:26	1
Naphthalene	ND		1.0	1.0	ug/L			07/25/12 23:26	1
n-Butylbenzene	ND		1.0	0.76	ug/L			07/25/12 23:26	1
N-Propylbenzene	ND		1.0	0.69	ug/L			07/25/12 23:26	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			07/25/12 23:26	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			07/25/12 23:26	1
Styrene	ND		1.0	1.0	ug/L			07/25/12 23:26	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			07/25/12 23:26	1
Tetrachloroethene	ND		1.0	0.58	ug/L			07/25/12 23:26	1
Toluene	ND		1.0	0.70	ug/L			07/25/12 23:26	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/25/12 23:26	1
Trichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			07/25/12 23:26	1
Vinyl acetate	ND		25	2.0	ug/L			07/25/12 23:26	1
Vinyl chloride	ND		1.0	0.50	ug/L			07/25/12 23:26	1
Xylenes, Total	ND		10	1.6	ug/L			07/25/12 23:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*78 - 118*		*07/25/12 23:26*	*1*
Dibromofluoromethane	*101*		*81 - 112*		*07/25/12 23:26*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/25/12 23:26*	*1*

Client Sample ID: MW-2

Lab Sample ID: 400-67251-2

Date Collected: 07/19/12 15:50
Matrix: Water
Date Received: 07/20/12 09:06

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			07/25/12 23:59	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			07/25/12 23:59	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			07/25/12 23:59	1
1,2,3-Trichloropropane	ND		5.0	0.86	ug/L			07/25/12 23:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			07/25/12 23:59	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			07/25/12 23:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.78	ug/L			07/25/12 23:59	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,2-Dichloroethene, Total	ND		10	0.64	ug/L			07/25/12 23:59	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			07/25/12 23:59	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			07/25/12 23:59	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			07/25/12 23:59	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 23:59	1

Client Sample Results

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Client Sample ID: MW-2

Date Collected: 07/19/12 15:50
Date Received: 07/20/12 09:06

Lab Sample ID: 400-67251-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		25	2.6	ug/L			07/25/12 23:59	1
2-Chlorotoluene	ND		1.0	0.57	ug/L			07/25/12 23:59	1
2-Hexanone	ND		25	3.1	ug/L			07/25/12 23:59	1
4-Chlorotoluene	ND		1.0	0.56	ug/L			07/25/12 23:59	1
4-Methyl-2-pentanone (Methyl isobutyl ketone)	ND		25	1.8	ug/L			07/25/12 23:59	1
Acetone	ND		25	3.5	ug/L			07/25/12 23:59	1
Benzene	ND		1.0	0.34	ug/L			07/25/12 23:59	1
Bromobenzene	ND		1.0	0.54	ug/L			07/25/12 23:59	1
Bromochloromethane	ND		1.0	0.52	ug/L			07/25/12 23:59	1
Bromodichloromethane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Bromoform	ND		5.0	0.71	ug/L			07/25/12 23:59	1
Bromomethane	ND		1.0	0.98	ug/L			07/25/12 23:59	1
Carbon disulfide	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Chlorobenzene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Chlorodibromomethane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Chloroethane	ND		1.0	0.76	ug/L			07/25/12 23:59	1
Chloroform	ND		1.0	0.60	ug/L			07/25/12 23:59	1
Chloromethane	ND		1.0	0.83	ug/L			07/25/12 23:59	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/25/12 23:59	1
Dibromomethane	ND		5.0	0.59	ug/L			07/25/12 23:59	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			07/25/12 23:59	1
Diisopropyl ether	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Ethylbenzene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Hexachlorobutadiene	ND	*	5.0	0.90	ug/L			07/25/12 23:59	1
Iodomethane	ND		1.0	0.68	ug/L			07/25/12 23:59	1
Isopropylbenzene	ND		1.0	0.53	ug/L			07/25/12 23:59	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			07/25/12 23:59	1
Methylene Chloride	ND		1.0	1.0	ug/L			07/25/12 23:59	1
Naphthalene	ND		1.0	1.0	ug/L			07/25/12 23:59	1
n-Butylbenzene	ND		1.0	0.76	ug/L			07/25/12 23:59	1
N-Propylbenzene	ND		1.0	0.69	ug/L			07/25/12 23:59	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			07/25/12 23:59	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			07/25/12 23:59	1
Styrene	ND		1.0	1.0	ug/L			07/25/12 23:59	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			07/25/12 23:59	1
Tetrachloroethene	ND		1.0	0.58	ug/L			07/25/12 23:59	1
Toluene	ND		1.0	0.70	ug/L			07/25/12 23:59	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/25/12 23:59	1
Trichloroethene	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			07/25/12 23:59	1
Vinyl acetate	ND		25	2.0	ug/L			07/25/12 23:59	1
Vinyl chloride	ND		1.0	0.50	ug/L			07/25/12 23:59	1
Xylenes, Total	ND		10	1.6	ug/L			07/25/12 23:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*78 - 118*		*07/25/12 23:59*	*1*

Client Sample Results

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Client Sample ID: MW-2

Lab Sample ID: 400-67251-2
Matrix: Water

Date Collected: 07/19/12 15:50
Date Received: 07/20/12 09:06

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane	*103*		*81 - 112*		*07/25/12 23:59*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*07/25/12 23:59*	*1*

Client Sample ID: Trip Blank

Lab Sample ID: 400-67251-3
Matrix: Water

Date Collected: 07/20/12 09:06
Date Received: 07/20/12 09:06

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			07/26/12 00:33	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			07/26/12 00:33	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			07/26/12 00:33	1
1,2,3-Trichloropropane	ND		5.0	0.86	ug/L			07/26/12 00:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			07/26/12 00:33	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			07/26/12 00:33	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.78	ug/L			07/26/12 00:33	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,2-Dichloroethene, Total	ND		10	0.64	ug/L			07/26/12 00:33	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			07/26/12 00:33	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			07/26/12 00:33	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			07/26/12 00:33	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
2-Butanone (MEK)	ND		25	2.6	ug/L			07/26/12 00:33	1
2-Chlorotoluene	ND		1.0	0.57	ug/L			07/26/12 00:33	1
2-Hexanone	ND		25	3.1	ug/L			07/26/12 00:33	1
4-Chlorotoluene	ND		1.0	0.56	ug/L			07/26/12 00:33	1
4-Methyl-2-pentanone (Methyl isobutyl ketone)	ND		25	1.8	ug/L			07/26/12 00:33	1
Acetone	ND		25	3.5	ug/L			07/26/12 00:33	1
Benzene	ND		1.0	0.34	ug/L			07/26/12 00:33	1
Bromobenzene	ND		1.0	0.54	ug/L			07/26/12 00:33	1
Bromochloromethane	ND		1.0	0.52	ug/L			07/26/12 00:33	1
Bromodichloromethane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Bromoform	ND		5.0	0.71	ug/L			07/26/12 00:33	1
Bromomethane	ND		1.0	0.98	ug/L			07/26/12 00:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Chlorobenzene	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Chlorodibromomethane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Chloroethane	ND		1.0	0.76	ug/L			07/26/12 00:33	1
Chloroform	ND		1.0	0.60	ug/L			07/26/12 00:33	1
Chloromethane	ND		1.0	0.83	ug/L			07/26/12 00:33	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/26/12 00:33	1

Client Sample Results

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Client Sample ID: Trip Blank

Lab Sample ID: 400-67251-3

Date Collected: 07/20/12 09:06
Matrix: Water
Date Received: 07/20/12 09:06

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/26/12 00:33	1
Dibromomethane	ND		5.0	0.59	ug/L			07/26/12 00:33	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			07/26/12 00:33	1
Diisopropyl ether	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Ethylbenzene	ND		1.0	0.50	ug/L			07/26/12 00:33	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Hexachlorobutadiene	ND	*	5.0	0.90	ug/L			07/26/12 00:33	1
Iodomethane	ND		1.0	0.68	ug/L			07/26/12 00:33	1
Isopropylbenzene	ND		1.0	0.53	ug/L			07/26/12 00:33	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			07/26/12 00:33	1
Methylene Chloride	ND		1.0	1.0	ug/L			07/26/12 00:33	1
Naphthalene	ND		1.0	1.0	ug/L			07/26/12 00:33	1
n-Butylbenzene	ND		1.0	0.76	ug/L			07/26/12 00:33	1
N-Propylbenzene	ND		1.0	0.69	ug/L			07/26/12 00:33	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			07/26/12 00:33	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			07/26/12 00:33	1
Styrene	ND		1.0	1.0	ug/L			07/26/12 00:33	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			07/26/12 00:33	1
Tetrachloroethene	ND		1.0	0.58	ug/L			07/26/12 00:33	1
Toluene	ND		1.0	0.70	ug/L			07/26/12 00:33	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/26/12 00:33	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/26/12 00:33	1
Trichloroethene	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			07/26/12 00:33	1
Vinyl acetate	ND		25	2.0	ug/L			07/26/12 00:33	1
Vinyl chloride	ND		1.0	0.50	ug/L			07/26/12 00:33	1
Xylenes, Total	ND		10	1.6	ug/L			07/26/12 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*78 - 118*		*07/26/12 00:33*	*1*
Dibromofluoromethane	*102*		*81 - 112*		*07/26/12 00:33*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/26/12 00:33*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Lab Chronicle

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Client Sample ID: MW-1

Lab Sample ID: 400-67251-1
Date Collected: 07/19/12 15:35
Matrix: Water
Date Received: 07/20/12 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	159190	07/25/12 23:26	WD	TAL PEN

Client Sample ID: MW-2

Lab Sample ID: 400-67251-2
Date Collected: 07/19/12 15:50
Matrix: Water
Date Received: 07/20/12 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	159190	07/25/12 23:59	WD	TAL PEN

Client Sample ID: Trip Blank

Lab Sample ID: 400-67251-3
Date Collected: 07/20/12 09:06
Matrix: Water
Date Received: 07/20/12 09:06

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	159190	07/26/12 00:33	WD	TAL PEN

Laboratory References:

TAL PEN = TestAmerica Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 400-159190/4
Matrix: Water
Analysis Batch: 159190

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.52	ug/L			07/25/12 21:10	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,1,2-Trichloroethane	ND		5.0	0.50	ug/L			07/25/12 21:10	1
1,1-Dichloroethane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,1-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,1-Dichloropropene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,2,3-Trichlorobenzene	ND		1.0	0.70	ug/L			07/25/12 21:10	1
1,2,3-Trichloropropane	ND		5.0	0.86	ug/L			07/25/12 21:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.82	ug/L			07/25/12 21:10	1
1,2,4-Trimethylbenzene	ND		1.0	0.82	ug/L			07/25/12 21:10	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.78	ug/L			07/25/12 21:10	1
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,2-Dichloroethane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,2-Dichloroethene, Total	ND		10	0.64	ug/L			07/25/12 21:10	1
1,2-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,3,5-Trimethylbenzene	ND		1.0	0.56	ug/L			07/25/12 21:10	1
1,3-Dichlorobenzene	ND		1.0	0.54	ug/L			07/25/12 21:10	1
1,3-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,4-Dichlorobenzene	ND		1.0	0.64	ug/L			07/25/12 21:10	1
2,2-Dichloropropane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
2-Butanone (MEK)	ND		25	2.6	ug/L			07/25/12 21:10	1
2-Chlorotoluene	ND		1.0	0.57	ug/L			07/25/12 21:10	1
2-Hexanone	ND		25	3.1	ug/L			07/25/12 21:10	1
4-Chlorotoluene	ND		1.0	0.56	ug/L			07/25/12 21:10	1
4-Methyl-2-pentanone (Methyl isobutyl ketone)	ND		25	1.8	ug/L			07/25/12 21:10	1
Acetone	ND		25	3.5	ug/L			07/25/12 21:10	1
Benzene	ND		1.0	0.34	ug/L			07/25/12 21:10	1
Bromobenzene	ND		1.0	0.54	ug/L			07/25/12 21:10	1
Bromochloromethane	ND		1.0	0.52	ug/L			07/25/12 21:10	1
Bromodichloromethane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Bromoform	ND		5.0	0.71	ug/L			07/25/12 21:10	1
Bromomethane	ND		1.0	0.98	ug/L			07/25/12 21:10	1
Carbon disulfide	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Carbon tetrachloride	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Chlorobenzene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Chlorodibromomethane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Chloroethane	ND		1.0	0.76	ug/L			07/25/12 21:10	1
Chloroform	ND		1.0	0.60	ug/L			07/25/12 21:10	1
Chloromethane	ND		1.0	0.83	ug/L			07/25/12 21:10	1
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
cis-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/25/12 21:10	1
Dibromomethane	ND		5.0	0.59	ug/L			07/25/12 21:10	1
Dichlorodifluoromethane	ND		1.0	0.85	ug/L			07/25/12 21:10	1
Diisopropyl ether	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Ethylbenzene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
1,2-Dibromoethane	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Hexachlorobutadiene	ND		5.0	0.90	ug/L			07/25/12 21:10	1
Iodomethane	ND		1.0	0.68	ug/L			07/25/12 21:10	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 400-159190/4
Matrix: Water
Analysis Batch: 159190

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0	0.53	ug/L			07/25/12 21:10	1
Methyl tert-butyl ether	ND		1.0	0.74	ug/L			07/25/12 21:10	1
Methylene Chloride	ND		1.0	1.0	ug/L			07/25/12 21:10	1
Naphthalene	ND		1.0	1.0	ug/L			07/25/12 21:10	1
n-Butylbenzene	ND		1.0	0.76	ug/L			07/25/12 21:10	1
N-Propylbenzene	ND		1.0	0.69	ug/L			07/25/12 21:10	1
p-Isopropyltoluene	ND		1.0	0.71	ug/L			07/25/12 21:10	1
sec-Butylbenzene	ND		1.0	0.70	ug/L			07/25/12 21:10	1
Styrene	ND		1.0	1.0	ug/L			07/25/12 21:10	1
tert-Butylbenzene	ND		1.0	0.63	ug/L			07/25/12 21:10	1
Tetrachloroethene	ND		1.0	0.58	ug/L			07/25/12 21:10	1
Toluene	ND		1.0	0.70	ug/L			07/25/12 21:10	1
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
trans-1,3-Dichloropropene	ND		5.0	0.50	ug/L			07/25/12 21:10	1
Trichloroethene	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Trichlorofluoromethane	ND		1.0	0.52	ug/L			07/25/12 21:10	1
Vinyl acetate	ND		25	2.0	ug/L			07/25/12 21:10	1
Vinyl chloride	ND		1.0	0.50	ug/L			07/25/12 21:10	1
Xylenes, Total	ND		10	1.6	ug/L			07/25/12 21:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*78 - 118*		*07/25/12 21:10*	*1*
Dibromofluoromethane	*102*		*81 - 112*		*07/25/12 21:10*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/25/12 21:10*	*1*

Lab Sample ID: LCS 400-159190/1000
Matrix: Water
Analysis Batch: 159190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	50.0	38.9		ug/L		78	66 - 126
1,1,1-Trichloroethane	50.0	48.2		ug/L		96	66 - 130
1,1,2,2-Tetrachloroethane	50.0	51.6		ug/L		103	68 - 132
1,1,2-Trichloroethane	50.0	49.3		ug/L		99	81 - 117
1,1-Dichloroethane	50.0	56.1		ug/L		112	75 - 126
1,1-Dichloroethene	50.0	48.4		ug/L		97	50 - 134
1,1-Dichloropropene	50.0	45.2		ug/L		90	74 - 121
1,2,3-Trichlorobenzene	50.0	48.8		ug/L		98	62 - 130
1,2,3-Trichloropropane	50.0	44.9		ug/L		90	72 - 125
1,2,4-Trichlorobenzene	50.0	49.5		ug/L		99	69 - 128
1,2,4-Trimethylbenzene	50.0	53.7		ug/L		107	77 - 127
1,2-Dibromo-3-Chloropropane	50.0	42.7		ug/L		85	52 - 124
1,2-Dichlorobenzene	50.0	46.5		ug/L		93	80 - 121
1,2-Dichloroethane	50.0	45.4		ug/L		91	69 - 128
1,2-Dichloroethene, Total	100	108		ug/L		108	80 - 118
1,2-Dichloropropane	50.0	56.4		ug/L		113	77 - 126
1,3,5-Trimethylbenzene	50.0	47.7		ug/L		95	82 - 119
1,3-Dichlorobenzene	50.0	50.4		ug/L		101	77 - 124
1,3-Dichloropropane	50.0	48.5		ug/L		97	77 - 120

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-159190/1000
Matrix: Water
Analysis Batch: 159190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	50.0	47.5		ug/L		95	79 - 119
2,2-Dichloropropane	50.0	44.1		ug/L		88	52 - 135
2-Butanone (MEK)	200	211		ug/L		106	62 - 137
2-Chlorotoluene	50.0	54.2		ug/L		108	75 - 126
2-Hexanone	200	274		ug/L		137	60 - 150
4-Chlorotoluene	50.0	53.5		ug/L		107	81 - 125
4-Methyl-2-pentanone (Methyl isobutyl ketone)	200	273		ug/L		137	63 - 150
Acetone	200	271		ug/L		135	24 - 150
Benzene	50.0	47.5		ug/L		95	79 - 116
Bromobenzene	50.0	46.5		ug/L		93	80 - 121
Bromochloromethane	50.0	47.5		ug/L		95	82 - 114
Bromodichloromethane	50.0	49.5		ug/L		99	75 - 127
Bromoform	50.0	41.5		ug/L		83	65 - 121
Bromomethane	50.0	20.1		ug/L		40	10 - 150
Carbon disulfide	50.0	45.8		ug/L		92	41 - 140
Carbon tetrachloride	50.0	38.4		ug/L		77	46 - 141
Chlorobenzene	50.0	46.8		ug/L		94	85 - 113
Chlorodibromomethane	50.0	40.0		ug/L		80	63 - 125
Chloroethane	50.0	33.6		ug/L		67	37 - 150
Chloroform	50.0	49.6		ug/L		99	73 - 122
Chloromethane	50.0	63.7		ug/L		127	49 - 141
cis-1,2-Dichloroethene	50.0	57.2		ug/L		114	78 - 122
cis-1,3-Dichloropropene	50.0	47.8		ug/L		96	70 - 122
Dibromomethane	50.0	45.8		ug/L		92	78 - 117
Dichlorodifluoromethane	50.0	45.1		ug/L		90	27 - 144
Diisopropyl ether	50.0	69.1		ug/L		138	69 - 143
Ethylbenzene	50.0	48.7		ug/L		97	82 - 115
1,2-Dibromoethane	50.0	47.2		ug/L		94	82 - 119
Hexachlorobutadiene	50.0	78.7	*	ug/L		157	35 - 150
Iodomethane	50.0	37.5		ug/L		75	58 - 141
Isopropylbenzene	50.0	41.7		ug/L		83	76 - 118
Methyl tert-butyl ether	50.0	50.6		ug/L		101	70 - 124
Methylene Chloride	50.0	53.4		ug/L		107	70 - 130
Naphthalene	50.0	42.9		ug/L		86	45 - 131
n-Butylbenzene	50.0	56.4		ug/L		113	76 - 138
N-Propylbenzene	50.0	54.5		ug/L		109	75 - 128
p-Isopropyltoluene	50.0	45.6		ug/L		91	78 - 120
sec-Butylbenzene	50.0	52.3		ug/L		105	78 - 128
Styrene	50.0	42.9		ug/L		86	79 - 124
tert-Butylbenzene	50.0	49.0		ug/L		98	82 - 120
Tetrachloroethene	50.0	42.8		ug/L		86	76 - 124
Toluene	50.0	46.6		ug/L		93	81 - 112
trans-1,2-Dichloroethene	50.0	50.8		ug/L		102	70 - 126
trans-1,3-Dichloropropene	50.0	45.6		ug/L		91	64 - 120
Trichloroethene	50.0	43.5		ug/L		87	77 - 119
Trichlorofluoromethane	50.0	24.4		ug/L		49	26 - 150
Vinyl acetate	100	74.8		ug/L		75	54 - 140
Vinyl chloride	50.0	50.2		ug/L		100	60 - 128
Xylenes, Total	150	148		ug/L		99	81 - 119

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 400-159190/1000
Matrix: Water
Analysis Batch: 159190

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*109*		*78 - 118*
Dibromofluoromethane	*102*		*81 - 112*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 400-67251-1 MS
Matrix: Water
Analysis Batch: 159190

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		50.0	29.9		ug/L		60	42 - 135
1,1,1-Trichloroethane	ND		50.0	42.8		ug/L		86	60 - 131
1,1,2,2-Tetrachloroethane	ND		50.0	54.5		ug/L		109	52 - 148
1,1,2-Trichloroethane	ND		50.0	47.2		ug/L		94	68 - 127
1,1-Dichloroethane	ND		50.0	50.9		ug/L		102	10 - 150
1,1-Dichloroethene	ND		50.0	40.0		ug/L		80	10 - 150
1,1-Dichloropropene	ND		50.0	35.7		ug/L		71	59 - 126
1,2,3-Trichlorobenzene	ND		50.0	28.9		ug/L		58	30 - 137
1,2,3-Trichloropropane	ND		50.0	47.9		ug/L		96	67 - 130
1,2,4-Trichlorobenzene	ND		50.0	24.9		ug/L		50	20 - 139
1,2,4-Trimethylbenzene	ND		50.0	21.3		ug/L		43	10 - 150
1,2-Dibromo-3-Chloropropane	ND		50.0	43.1		ug/L		86	50 - 133
1,2-Dichlorobenzene	ND		50.0	25.3		ug/L		51	10 - 150
1,2-Dichloroethane	ND		50.0	44.4		ug/L		89	10 - 150
1,2-Dichloroethene, Total	ND		100	92.8		ug/L		93	10 - 150
1,2-Dichloropropane	ND		50.0	50.4		ug/L		101	65 - 132
1,3,5-Trimethylbenzene	ND		50.0	22.8		ug/L		46	10 - 150
1,3-Dichlorobenzene	ND		50.0	23.8		ug/L		48	25 - 136
1,3-Dichloropropane	ND		50.0	45.6		ug/L		91	67 - 127
1,4-Dichlorobenzene	ND		50.0	21.4		ug/L		43	10 - 150
2,2-Dichloropropane	ND		50.0	38.1		ug/L		76	46 - 132
2-Butanone (MEK)	ND		100	111		ug/L		111	10 - 150
2-Chlorotoluene	ND		50.0	23.9		ug/L		48	10 - 150
2-Hexanone	ND		100	137		ug/L		137	24 - 150
4-Chlorotoluene	ND		50.0	22.4		ug/L		45	17 - 145
4-Methyl-2-pentanone (Methyl isobutyl ketone)	ND		100	140		ug/L		140	20 - 150
Acetone	ND		100	147		ug/L		147	10 - 150
Benzene	ND		50.0	39.9		ug/L		80	10 - 150
Bromobenzene	ND		50.0	27.9		ug/L		56	38 - 135
Bromochloromethane	ND		50.0	46.6		ug/L		93	75 - 120
Bromodichloromethane	ND		50.0	42.7		ug/L		85	61 - 133
Bromoform	ND		50.0	36.4		ug/L		73	54 - 125
Bromomethane	ND		50.0	14.6		ug/L		29	10 - 150
Carbon disulfide	ND		50.0	34.8		ug/L		70	10 - 150
Carbon tetrachloride	ND		50.0	31.0		ug/L		62	40 - 138
Chlorobenzene	ND		50.0	32.0		ug/L		64	10 - 150
Chlorodibromomethane	ND		50.0	36.1		ug/L		72	50 - 130
Chloroethane	ND		50.0	28.7		ug/L		57	38 - 150
Chloroform	ND		50.0	45.0		ug/L		90	10 - 150
Chloromethane	ND		50.0	37.8		ug/L		76	26 - 150

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-67251-1 MS | **Client Sample ID: MW-1**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 159190

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,2-Dichloroethene	ND		50.0	50.2		ug/L		100	10 - 150
cis-1,3-Dichloropropene	ND		50.0	38.5		ug/L		77	52 - 130
Dibromomethane	ND		50.0	43.8		ug/L		88	69 - 123
Dichlorodifluoromethane	ND		50.0	22.8		ug/L		46	10 - 150
Diisopropyl ether	ND		50.0	69.5		ug/L		139	10 - 150
Ethylbenzene	ND		50.0	24.7		ug/L		49	10 - 150
1,2-Dibromoethane	ND		50.0	44.7		ug/L		89	70 - 125
Hexachlorobutadiene	ND	*	50.0	13.0		ug/L		26	10 - 150
Iodomethane	ND		50.0	25.9		ug/L		52	37 - 145
Isopropylbenzene	ND		50.0	16.4		ug/L		33	10 - 150
Methyl tert-butyl ether	ND		50.0	52.4		ug/L		105	10 - 150
Methylene Chloride	ND		50.0	50.1		ug/L		100	10 - 150
Naphthalene	ND		50.0	32.8		ug/L		66	10 - 150
n-Butylbenzene	ND		50.0	13.2		ug/L		26	10 - 150
N-Propylbenzene	ND		50.0	18.8		ug/L		38	10 - 150
p-Isopropyltoluene	ND		50.0	18.3		ug/L		37	10 - 150
sec-Butylbenzene	ND		50.0	15.7		ug/L		31	10 - 150
Styrene	ND		50.0	26.9		ug/L		54	24 - 147
tert-Butylbenzene	ND		50.0	20.1		ug/L		40	10 - 150
Tetrachloroethene	ND		50.0	23.7		ug/L		47	10 - 150
Toluene	ND		50.0	32.4		ug/L		65	10 - 150
trans-1,2-Dichloroethene	ND		50.0	42.6		ug/L		85	66 - 126
trans-1,3-Dichloropropene	ND		50.0	36.4		ug/L		73	45 - 128
Trichloroethene	ND		50.0	31.5		ug/L		63	10 - 150
Trichlorofluoromethane	ND		50.0	21.3		ug/L		43	29 - 144
Vinyl acetate	ND		100	15.0	J	ug/L		15	10 - 150
Vinyl chloride	ND		50.0	37.9		ug/L		76	46 - 136
Xylenes, Total	ND		150	76.3		ug/L		51	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*78 - 118*
Dibromofluoromethane	*101*		*81 - 112*
Toluene-d8 (Surr)	*98*		*80 - 120*

Lab Sample ID: 400-67251-1 MSD | **Client Sample ID: MW-1**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 159190

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		50.0	32.0		ug/L		64	42 - 135	7	23
1,1,1-Trichloroethane	ND		50.0	46.1		ug/L		92	60 - 131	7	20
1,1,2,2-Tetrachloroethane	ND		50.0	57.1		ug/L		114	52 - 148	5	20
1,1,2-Trichloroethane	ND		50.0	49.6		ug/L		99	68 - 127	5	19
1,1-Dichloroethane	ND		50.0	55.0		ug/L		110	10 - 150	8	18
1,1-Dichloroethene	ND		50.0	43.0		ug/L		86	10 - 150	7	19
1,1-Dichloropropene	ND		50.0	38.8		ug/L		78	59 - 126	8	22
1,2,3-Trichlorobenzene	ND		50.0	30.2		ug/L		60	30 - 137	4	44
1,2,3-Trichloropropane	ND		50.0	50.0		ug/L		100	67 - 130	4	22
1,2,4-Trichlorobenzene	ND		50.0	25.2		ug/L		50	20 - 139	1	44

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-67251-1 MSD
Matrix: Water
Analysis Batch: 159190

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trimethylbenzene	ND		50.0	21.1		ug/L		42	10 - 150	1	54
1,2-Dibromo-3-Chloropropane	ND		50.0	46.8		ug/L		94	50 - 133	8	30
1,2-Dichlorobenzene	ND		50.0	25.8		ug/L		52	10 - 150	2	38
1,2-Dichloroethane	ND		50.0	46.6		ug/L		93	10 - 150	5	19
1,2-Dichloroethene, Total	ND		100	99.9		ug/L		100	10 - 150	7	19
1,2-Dichloropropane	ND		50.0	53.1		ug/L		106	65 - 132	5	18
1,3,5-Trimethylbenzene	ND		50.0	22.6		ug/L		45	10 - 150	1	53
1,3-Dichlorobenzene	ND		50.0	23.8		ug/L		48	25 - 136	0	44
1,3-Dichloropropane	ND		50.0	47.7		ug/L		95	67 - 127	5	20
1,4-Dichlorobenzene	ND		50.0	21.5		ug/L		43	10 - 150	1	45
2,2-Dichloropropane	ND		50.0	41.2		ug/L		82	46 - 132	8	20
2-Butanone (MEK)	ND		100	119		ug/L		119	10 - 150	7	21
2-Chlorotoluene	ND		50.0	24.6		ug/L		49	10 - 150	3	47
2-Hexanone	ND		100	146		ug/L		146	24 - 150	6	24
4-Chlorotoluene	ND		50.0	22.3		ug/L		45	17 - 145	1	51
4-Methyl-2-pentanone (Methyl isobutyl ketone)	ND		100	148		ug/L		148	20 - 150	6	20
Acetone	ND		100	144		ug/L		144	10 - 150	2	22
Benzene	ND		50.0	42.7		ug/L		85	10 - 150	7	19
Bromobenzene	ND		50.0	28.4		ug/L		57	38 - 135	2	35
Bromochloromethane	ND		50.0	48.8		ug/L		98	75 - 120	5	17
Bromodichloromethane	ND		50.0	45.5		ug/L		91	61 - 133	6	19
Bromoform	ND		50.0	38.5		ug/L		77	54 - 125	6	19
Bromomethane	ND		50.0	16.7		ug/L		33	10 - 150	13	24
Carbon disulfide	ND		50.0	38.3		ug/L		77	10 - 150	9	23
Carbon tetrachloride	ND		50.0	33.3		ug/L		67	40 - 138	7	21
Chlorobenzene	ND		50.0	33.3		ug/L		67	10 - 150	4	30
Chlorodibromomethane	ND		50.0	37.9		ug/L		76	50 - 130	5	21
Chloroethane	ND		50.0	31.9		ug/L		64	38 - 150	11	23
Chloroform	ND		50.0	48.5		ug/L		97	10 - 150	7	18
Chloromethane	ND		50.0	42.6		ug/L		85	26 - 150	12	23
cis-1,2-Dichloroethene	ND		50.0	54.5		ug/L		109	10 - 150	8	20
cis-1,3-Dichloropropene	ND		50.0	41.2		ug/L		82	52 - 130	7	20
Dibromomethane	ND		50.0	46.4		ug/L		93	69 - 123	6	18
Dichlorodifluoromethane	ND		50.0	23.9		ug/L		48	10 - 150	5	23
Diisopropyl ether	ND		50.0	74.4		ug/L		149	10 - 150	7	24
Ethylbenzene	ND		50.0	25.5		ug/L		51	10 - 150	3	40
1,2-Dibromoethane	ND		50.0	47.0		ug/L		94	70 - 125	5	21
Hexachlorobutadiene	ND	*	50.0	11.3		ug/L		23	10 - 150	14	92
Iodomethane	ND		50.0	34.3		ug/L		69	37 - 145	28	36
Isopropylbenzene	ND		50.0	16.7		ug/L		33	10 - 150	2	46
Methyl tert-butyl ether	ND		50.0	56.5		ug/L		113	10 - 150	7	18
Methylene Chloride	ND		50.0	53.8		ug/L		108	10 - 150	7	18
Naphthalene	ND		50.0	36.4		ug/L		73	10 - 150	10	53
n-Butylbenzene	ND		50.0	12.4		ug/L		25	10 - 150	7	76
N-Propylbenzene	ND		50.0	18.5		ug/L		37	10 - 150	2	57
p-Isopropyltoluene	ND		50.0	17.7		ug/L		35	10 - 150	3	62
sec-Butylbenzene	ND		50.0	15.2		ug/L		30	10 - 150	3	64
Styrene	ND		50.0	27.4		ug/L		55	24 - 147	2	40
tert-Butylbenzene	ND		50.0	17.6		ug/L		35	10 - 150	14	54

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 400-67251-1 MSD
Matrix: Water
Analysis Batch: 159190

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		50.0	24.5		ug/L		49	10 - 150	3	35
Toluene	ND		50.0	34.1		ug/L		68	10 - 150	5	26
trans-1,2-Dichloroethene	ND		50.0	45.5		ug/L		91	66 - 126	7	19
trans-1,3-Dichloropropene	ND		50.0	38.3		ug/L		77	45 - 128	5	20
Trichloroethene	ND		50.0	33.2		ug/L		66	10 - 150	5	22
Trichlorofluoromethane	ND		50.0	23.3		ug/L		47	29 - 144	9	20
Vinyl acetate	ND		100	15.8	J	ug/L		16	10 - 150	5	44
Vinyl chloride	ND		50.0	41.9		ug/L		84	46 - 136	10	20
Xylenes, Total	ND		150	78.0		ug/L		52	10 - 150	2	41

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*108*		*78 - 118*
Dibromofluoromethane	*99*		*81 - 112*
Toluene-d8 (Surr)	*97*		*80 - 120*

QC Association Summary

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

GC/MS VOA

Analysis Batch: 159190

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-67251-1	MW-1	Total/NA	Water	8260B	
400-67251-1 MS	MW-1	Total/NA	Water	8260B	
400-67251-1 MSD	MW-1	Total/NA	Water	8260B	
400-67251-2	MW-2	Total/NA	Water	8260B	
400-67251-3	Trip Blank	Total/NA	Water	8260B	
LCS 400-159190/1000	Lab Control Sample	Total/NA	Water	8260B	
MB 400-159190/4	Method Blank	Total/NA	Water	8260B	

Chain of Custody Rec

400-67251 Chain of Custody

TAL-4124 (1007)

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☑

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

400-67251

Client	Project Manager	Date	Chain of Custody Number
Hart & Hickman	Steve Hart	7/19/12	194011
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
2923 S. Tryon St. Ste 100	(704) 586-0007 / shart@harthickman.com		

City	State	Zip Code	Site Contact	Lab Contact
Charlotte	NC	28203	Chad Hearn	Carolyn Hooper

Project Name and Location (State)	Carrier/Waybill Number
BHC-108 Charlotte, NC	

Contract/Purchase Order/Quote No.: BHC-108

Analysis (Attach list if more space is needed): VOC (8260)

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	VOC (8260)
MW-1	7/19/12	1535		✓						✓			✓
MW-2	7/19/12	1550		✓						✓			✓
TRIP BLANK	NA	NA		✓						✓			✓

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☑ Other H&H TAT

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Chad Hearn	7/19/12	1630	1. Received By: Carolyn D. Hooper	7/20/12	0906
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: 4.8°C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Checklist

Client: Hart & Hickman, PC

Job Number: 400-67251-1
SDG Number: Proj. BHC-108

Login Number: 67251
List Number: 1
Creator: Hooper, Carolyn

List Source: TestAmerica Pensacola

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.3°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Certification Summary

Client: Hart & Hickman, PC
Project/Site: BHC-108 - Charlotte, NC

TestAmerica Job ID: 400-67251-1
SDG: Proj. BHC-108

Laboratory: TestAmerica Pensacola

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40150	06-30-13
Arizona	State Program	9	AZ0710	01-11-13
Arkansas DEQ	State Program	6	88-0689	09-01-13
Florida	NELAC	4	E81010	06-30-13
Georgia	State Program	4	N/A	06-30-13
Illinois	NELAC	5	200041	10-09-12
Iowa	State Program	7	367	08-01-12
Kansas	NELAC	7	E-10253	10-31-12
Kentucky (UST)	State Program	4	53	07-05-13
Louisiana	NELAC	6	30976	06-30-13
Maryland	State Program	3	233	12-30-12
Massachusetts	State Program	1	M-FL094	06-30-13
Michigan	State Program	5	9912	06-30-12
New Hampshire	NELAC	1	2505	08-16-12
New Jersey	NELAC	2	FL006	06-30-13
North Carolina DENR	State Program	4	314	12-31-12
Oklahoma	State Program	6	9810	08-31-12
Pennsylvania	NELAC	3	68-00467	12-31-12
Rhode Island	State Program	1	LAO00307	12-30-12
South Carolina	State Program	4	96026	06-30-12
Tennessee	State Program	4	TN02907	06-30-13
Texas	NELAC	6	T104704286-12-4	09-30-12
USDA	Federal		P330-10-00407	12-10-13
Virginia	NELAC	3	460166	06-14-13
Washington	State Program	10	C915	08-08-12
West Virginia DEP	State Program	3	136	06-30-13