

**Appendix C**    Organic Analytical Laboratory Reports – October  
through December 2012

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12101603**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**October 29, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

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# PHASE SEPARATION SCIENCE, INC.



October 29, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12101603**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12101603**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 20, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101603

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/16/2012 at 11:05 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12101603-001	11711-Serene-First Draw	WATER	10/16/2012 08:05
12101603-002	11711-Serene-Flushed	WATER	10/16/2012 08:40
12101603-003	T-1	WATER	10/16/2012 07:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect.  
An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101603

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101603

Chesapeake GeoSciences, Inc., Columbia, MD

October 29, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11711-Serene-First Draw**      **Date/Time Sampled: 10/16/2012 08:05**      **PSS Sample ID: 12101603-001**  
**Matrix: WATER**      **Date/Time Received: 10/16/2012 11:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Bromoform	ND	ug/L	5.0		1	10/16/12	10/16/12 17:21	1014
Bromomethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Chlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Chloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Chloroform	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Chloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/16/12	10/16/12 17:21	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Ethylbenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Naphthalene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Styrene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 17:21	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101603

**Chesapeake GeoSciences, Inc., Columbia, MD**

October 29, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 11711-Serene-First Draw</b>	<b>Date/Time Sampled: 10/16/2012 08:05</b>	<b>PSS Sample ID: 12101603-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/16/2012 11:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Trichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
o-Xylene	ND	ug/L	0.50		1	10/16/12	10/16/12 17:21	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/16/12	10/16/12 17:21	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 17:21	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/16/12	10/16/12 17:21	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 17:21	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101603

Chesapeake GeoSciences, Inc., Columbia, MD

October 29, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11711-Serene-Flushed**      **Date/Time Sampled: 10/16/2012 08:40**      **PSS Sample ID: 12101603-002**  
**Matrix: WATER**      **Date/Time Received: 10/16/2012 11:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Bromoform	ND	ug/L	5.0		1	10/16/12	10/16/12 18:03	1014
Bromomethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Chlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Chloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Chloroform	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Chloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/16/12	10/16/12 18:03	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Ethylbenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Naphthalene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Styrene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 18:03	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101603

**Chesapeake GeoSciences, Inc., Columbia, MD**

October 29, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 11711-Serene-Flushed</b>	<b>Date/Time Sampled: 10/16/2012 08:40</b>	<b>PSS Sample ID: 12101603-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/16/2012 11:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Trichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
o-Xylene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:03	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/16/12	10/16/12 18:03	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 18:03	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/16/12	10/16/12 18:03	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 18:03	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101603

Chesapeake GeoSciences, Inc., Columbia, MD

October 29, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-1</b>	<b>Date/Time Sampled: 10/16/2012 07:00</b>	<b>PSS Sample ID: 12101603-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/16/2012 11:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Bromoform	ND	ug/L	5.0		1	10/16/12	10/16/12 18:44	1014
Bromomethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Chlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Chloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Chloroform	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Chloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/16/12	10/16/12 18:44	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Ethylbenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Naphthalene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Styrene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 18:44	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101603

**Chesapeake GeoSciences, Inc., Columbia, MD**

October 29, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-1</b>	<b>Date/Time Sampled: 10/16/2012 07:00</b>	<b>PSS Sample ID: 12101603-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/16/2012 11:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Trichloroethene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
o-Xylene	ND	ug/L	0.50		1	10/16/12	10/16/12 18:44	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/16/12	10/16/12 18:44	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 18:44	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/16/12	10/16/12 18:44	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/16/12	10/16/12 18:44	1014

**Company Name:** Chesapeake GeoSciences, Inc.  
**Project Name:** Monrovia BP /Former Green Valley Citgo (FGVC) (2005-0834FR)  
**Sampler(s):** Matt Emery  
**Project Manager:** Sean Daniel  
**Project ID:** CG-12-0788.03  
**P.O. Number:** CG12078803SD

**CHAIN-OF-CUSTODY RECORD**  
 12101603  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Field Sample ID	Date	Time	No. of Containers			Parameters	Preservative/Remarks	PSS Lab ID
			Water	Soil	Other			
11711 Senee - First Draw	10/16/12	08:05	X		2		1:1 HCl + 4°C	
11711 Senee - Flushed	10/16/12	08:40	X		2		1:1 HCl + 4°C	
T-1	10/16/12	07:00	X		2		1:1 HCl + 4°C	
Lab Water.com DI Water Dated 10/10/12								
<del>           (The remainder of the table is crossed out with a diagonal line)         </del>								
							1 COOLER	
							SEAL: ABS	
							ICE: PRES 15°C	
							DEL: CLIENT	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>[Signature]</i>	10/16/12 11:05	<i>[Signature]</i>					
(Printed) Matt Emery		(Printed) R. DAVIS		(Printed)		(Printed)	
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
(Printed)		(Printed)		(Printed)		(Printed)	

Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
 and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sddaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12101603	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/16/2012 11:05:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/20/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	15
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 10/16/2012

Rachel Davis

PM Review and Approval:

Date: 10/16/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12102504**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 8, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 8, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12102504**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12102504**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 29, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager





## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102504

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/25/2012 at 10:55 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12102504-001	11712 Serene-First Draw	WATER	10/24/2012 15:00
12102504-002	11712 Serene-Flushed	WATER	10/24/2012 15:40
12102504-003	3996 Farm-First Draw	WATER	10/24/2012 16:15
12102504-004	3996 Farm-Flushed	WATER	10/24/2012 16:40
12102504-005	11712 Serene-Flushed DB	WATER	10/24/2012 00:00
12102504-006	T-7	WATER	10/24/2012 13:45

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.





# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102504

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11712 Serene-First Draw**      **Date/Time Sampled: 10/24/2012 15:00**      **PSS Sample ID: 12102504-001**  
**Matrix: WATER**      **Date/Time Received: 10/25/2012 10:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 06:40	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 06:40	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 06:40	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 11712 Serene-First Draw</b>	<b>Date/Time Sampled: 10/24/2012 15:00</b>	<b>PSS Sample ID: 12102504-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 06:40	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 06:40	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 06:40	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 06:40	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 06:40	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11712 Serene-Flushed**      **Date/Time Sampled: 10/24/2012 15:40**      **PSS Sample ID: 12102504-002**  
**Matrix: WATER**      **Date/Time Received: 10/25/2012 10:55**

VOC In Drinking Water plus Oxygenates      Analytical Method: EPA 524.2      Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 07:23	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 07:23	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 07:23	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 11712 Serene-Flushed</b>	<b>Date/Time Sampled: 10/24/2012 15:40</b>	<b>PSS Sample ID: 12102504-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 07:23	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 07:23	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 07:23	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 07:23	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 07:23	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3996 Farm-First Draw**      **Date/Time Sampled: 10/24/2012 16:15**      **PSS Sample ID: 12102504-003**  
**Matrix: WATER**      **Date/Time Received: 10/25/2012 10:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 08:06	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 08:06	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 08:06	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3996 Farm-First Draw</b>	<b>Date/Time Sampled: 10/24/2012 16:15</b>	<b>PSS Sample ID: 12102504-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:06	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 08:06	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 08:06	1014
tert-Butyl alcohol	<b>29</b>	ug/L	20		1	10/28/12	10/29/12 08:06	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 08:06	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3996 Farm-Flushed**      **Date/Time Sampled: 10/24/2012 16:40**      **PSS Sample ID: 12102504-004**  
**Matrix: WATER**      **Date/Time Received: 10/25/2012 10:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 08:49	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 08:49	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Methyl-t-butyl ether	<b>79</b>	ug/L	5.0		10	10/28/12	11/01/12 22:54	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 08:49	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3996 Farm-Flushed</b>	<b>Date/Time Sampled: 10/24/2012 16:40</b>	<b>PSS Sample ID: 12102504-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 08:49	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 08:49	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 08:49	1014
tert-Butyl alcohol	<b>22</b>	ug/L	20		1	10/28/12	10/29/12 08:49	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 08:49	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11712 Serene-Flushed DB**      **Date/Time Sampled: 10/24/2012 00:00**      **PSS Sample ID: 12102504-005**  
**Matrix: WATER**      **Date/Time Received: 10/25/2012 10:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 09:32	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 09:32	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 09:32	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 11712 Serene-Flushed DB</b>	<b>Date/Time Sampled: 10/24/2012 00:00</b>	<b>PSS Sample ID: 12102504-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 09:32	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 09:32	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 09:32	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 09:32	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 09:32	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-7</b>	<b>Date/Time Sampled: 10/24/2012 13:45</b>	<b>PSS Sample ID: 12102504-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 10:16	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 10:16	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 10:16	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102504

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-7</b>	<b>Date/Time Sampled: 10/24/2012 13:45</b>	<b>PSS Sample ID: 12102504-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:16	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 10:16	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 10:16	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 10:16	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 10:16	1014

**Company Name:** Chesapeake GeoSciences, Inc.  
**Project Manager:** Sean Daniel  
**Project Name:** Monrovia BP /Former Green Valley Cligo (FGVC) (2005-0834FR)  
**Project ID:** CG-12-0788.03  
**Sampler(s):** Matt Emery  
**P.O. Number:** CG12078803SD

Field Sample ID	Date	Time	No. of Containers			Other	Preservative/Remarks	PSS Lab ID
			Water	Soil	VOCs via EPA 524.2			
11712 serene - First Draw	10/24/10	15:00	X		2	X	4°C + 1:1 HCl	
11712 serene - Flushed		15:40	X		2	X	4°C + 1:1 HCl	
3986 Farm - First Draw		16:15	X		2	X	4°C + 1:1 HCl	
3986 Farm - Flushed		16:40	X		2	X	4°C + 1:1 HCl	
11712 serene - Flushed DB	V		X		2	X	4°C + 1:1 HCl	
T-7	10/24/10	13:45	X		2	X	4°C + 1:1 HCl	
							Lab water.com DI water	
							used for T-7	
							# of Coolers: 1	
							Custody Seal: ABS	
							Ice Present: PILES Temp: 4°C	
							Shipping Carrier: CURENT	

Relinquished by: (Signature) <i>Matt Emery</i>	Date/Time 10/25/10	Received by: (Signature) <i>[Signature]</i>	Relinquished by: (Signature)	Date/Time	Received by: (Signature)
(Printed) Matt Emery	10:55	(Printed) R. DAVIS	(Printed)		(Printed)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses. E-mail results to sdaniel@cgs.us.com	
(Printed)		(Printed)			



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12102504	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/25/2012 10:55:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/29/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes	Sampler Name	<u>Matt Emery</u>
Chain of Custody	Yes	MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes	Custody Seal(s) Intact?	Not Applicable
Intact?	Yes	Seal(s) Signed / Dated	Not Applicable
Labeled and Labels Legible?	Yes		

Total No. of Samples Received	6	Total No. of Containers Received	12
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### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By: Rachel Davis Date: 10/25/2012  
 Rachel Davis

PM Review and Approval: Amy Friedlander Date: 10/25/2012  
 Amy Friedlander



# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12102401**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 7, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**



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# PHASE SEPARATION SCIENCE, INC.



November 7, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12102401**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12102401**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 28, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



# Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102401

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/24/2012 at 11:20 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12102401-001	3740 Blueberry-First Draw	WATER	10/24/2012 07:10
12102401-002	3740 Blueberry-Flushed	WATER	10/24/2012 07:55
12102401-003	T-6	WATER	10/24/2012 06:05
12102401-004	3995 Farm-First Draw	WATER	10/24/2012 08:20
12102401-005	3995 Farm-Flushed	WATER	10/24/2012 08:55

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102401

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

## Sample Receipt:

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

Chesapeake GeoSciences, Inc., Columbia, MD

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3740 Blueberry-First Draw**      **Date/Time Sampled: 10/24/2012 07:10**      **PSS Sample ID: 12102401-001**  
**Matrix: WATER**      **Date/Time Received: 10/24/2012 11:20**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/28/12 22:51	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Chloroform	<b>0.73</b>	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/28/12 22:51	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/28/12 22:51	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3740 Blueberry-First Draw</b>	<b>Date/Time Sampled: 10/24/2012 07:10</b>	<b>PSS Sample ID: 12102401-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/28/12 22:51	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/28/12 22:51	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/28/12 22:51	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/28/12 22:51	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/28/12 22:51	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

Chesapeake GeoSciences, Inc., Columbia, MD

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3740 Blueberry-Flushed**      **Date/Time Sampled: 10/24/2012 07:55**      **PSS Sample ID: 12102401-002**  
**Matrix: WATER**      **Date/Time Received: 10/24/2012 11:20**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/28/12 23:34	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Chloroform	<b>0.60</b>	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/28/12 23:34	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/28/12 23:34	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

Chesapeake GeoSciences, Inc., Columbia, MD

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3740 Blueberry-Flushed</b>	<b>Date/Time Sampled: 10/24/2012 07:55</b>	<b>PSS Sample ID: 12102401-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/28/12 23:34	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/28/12 23:34	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/28/12 23:34	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/28/12 23:34	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/28/12 23:34	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

Chesapeake GeoSciences, Inc., Columbia, MD

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-6</b>	<b>Date/Time Sampled: 10/24/2012 06:05</b>	<b>PSS Sample ID: 12102401-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 00:16	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 00:16	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 00:16	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-6</b>	<b>Date/Time Sampled: 10/24/2012 06:05</b>	<b>PSS Sample ID: 12102401-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 00:16	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 00:16	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 00:16	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 00:16	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 00:16	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

Chesapeake GeoSciences, Inc., Columbia, MD

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3995 Farm-First Draw</b>	<b>Date/Time Sampled: 10/24/2012 08:20</b>	<b>PSS Sample ID: 12102401-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 13:07	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 13:07	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 13:07	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3995 Farm-First Draw</b>	<b>Date/Time Sampled: 10/24/2012 08:20</b>	<b>PSS Sample ID: 12102401-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 13:07	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 13:07	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 13:07	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 13:07	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 13:07	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

Chesapeake GeoSciences, Inc., Columbia, MD

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3995 Farm-Flushed</b>	<b>Date/Time Sampled: 10/24/2012 08:55</b>	<b>PSS Sample ID: 12102401-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 05:58	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 05:58	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 05:58	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102401

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 7, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3995 Farm-Flushed</b>	<b>Date/Time Sampled: 10/24/2012 08:55</b>	<b>PSS Sample ID: 12102401-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/24/2012 11:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 05:58	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 05:58	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 05:58	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 05:58	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 05:58	1014

**CHAIN-OF-CUSTODY RECORD**  
**12102401**  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	Parameters	Preservative/Remarks	PSS Lab ID
3740 Blueberry - First Draw	10/24/12	07:10	X			2		40c + 1:1 HCl	
3740 Blueberry - Flushed		07:55	X			2		40c + 1:1 HCl	
T-6		6:05	X			2		40c + 1:1 HCl	
3995 Farm - First Draw	10/24/12	08:20	X			2		40c + 1:1 HCl	
3995 Farm - Flushed	10/24/12	08:55	X			2		40c + 1:1 HCl	
Trip Blank (T-6) - Lab water.com Distilled Water Received 10/10/12									

Project Manager: Sean Daniel  
 Project ID: CG-12-0788.03  
 P.O. Number: CG12078803SD  
 VOCs via EPA 524.2

Company Name: Chesapeake GeoSciences, Inc.  
 Project Name: Monrovia BP / Former Green Valley Cito (FGVC) (2005-0834FR)  
 Sampler(s): **Lara Bennett**  
 Matt Emery  
 LS 10/24/12

Relinquished by: (Signature) 	Date/Time 10/24/12	Received by: (Signature) 	Date/Time 11/20/12
(Printed) Lara Bennett		(Printed) R. DAVIS	
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
(Printed)		(Printed)	

# of Coolers: 1  
 Custody Seal: ABS  
 Ice Present: PLES Temp: 8°C  
 Shipping Carrier: ~~OTTENT~~

Remarks: MDE-OCP Level I Deliverables/Rates **RMS 2008 Rates**  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@ogs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12102401	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/24/2012 11:20:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/28/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	8
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Lara Bennett</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 5

Total No. of Containers Received 10

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 10/24/2012

Rachel Davis

PM Review and Approval:

Date: 10/24/2012

Amy Friedlander



# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12110602**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 20, 2012**  
**Phase Separation Science, Inc.**  
**6630 Baltimore National Pike**  
**Baltimore, MD 21228**  
**Phone: (410) 747-8770**  
**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 20, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12110602**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12110602**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on December 11, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110602

The following samples were received under chain of custody by Phase Separation Science (PSS) on 11/06/2012 at 09:45 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12110602-001	3806 Greenridge-First Draw	WATER	11/06/2012 05:05
12110602-002	3806 Greenridge-Flushed	WATER	11/06/2012 05:35
12110602-003	11789 Thomas Spring-First Draw	WATER	11/06/2012 06:05
12110602-004	11789 Thomas Spring-Flushed	WATER	11/06/2012 06:45
12110602-005	T-10	WATER	11/06/2012 03:30

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110602

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

Chesapeake GeoSciences, Inc., Columbia, MD

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3806 Greenridge-First Draw**    **Date/Time Sampled: 11/06/2012 05:05**    **PSS Sample ID: 12110602-001**  
**Matrix: WATER**    **Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Bromoform	ND	ug/L	5.0		1	11/12/12	11/13/12 08:17	1014
Bromomethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Chlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Chloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Chloroform	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Chloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/12/12	11/13/12 08:17	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Ethylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Naphthalene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Styrene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 08:17	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3806 Greenridge-First Draw      Date/Time Sampled: 11/06/2012 05:05      PSS Sample ID: 12110602-001**  
**Matrix: WATER      Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Trichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
o-Xylene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:17	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/12/12	11/13/12 08:17	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 08:17	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/12/12	11/13/12 08:17	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 08:17	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

Chesapeake GeoSciences, Inc., Columbia, MD

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3806 Greenridge-Flushed**      **Date/Time Sampled: 11/06/2012 05:35**      **PSS Sample ID: 12110602-002**  
**Matrix: WATER**      **Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Bromoform	ND	ug/L	5.0		1	11/12/12	11/13/12 08:58	1014
Bromomethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Chlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Chloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Chloroform	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Chloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/12/12	11/13/12 08:58	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Ethylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Naphthalene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Styrene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 08:58	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3806 Greenridge-Flushed</b>	<b>Date/Time Sampled: 11/06/2012 05:35</b>	<b>PSS Sample ID: 12110602-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/06/2012 09:45</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Trichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
o-Xylene	ND	ug/L	0.50		1	11/12/12	11/13/12 08:58	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/12/12	11/13/12 08:58	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 08:58	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/12/12	11/13/12 08:58	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 08:58	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

Chesapeake GeoSciences, Inc., Columbia, MD

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11789 Thomas Spring-First Dr** **Date/Time Sampled: 11/06/2012 06:05** **PSS Sample ID: 12110602-003**  
**Matrix: WATER** **Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Bromoform	ND	ug/L	5.0		1	11/12/12	11/13/12 09:38	1014
Bromomethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Chlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Chloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Chloroform	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Chloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/12/12	11/13/12 09:38	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Ethylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Naphthalene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Styrene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 09:38	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11789 Thomas Spring-First Dr: Date/Time Sampled: 11/06/2012 06:05 PSS Sample ID: 12110602-003**  
**Matrix: WATER Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Trichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
o-Xylene	ND	ug/L	0.50		1	11/12/12	11/13/12 09:38	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/12/12	11/13/12 09:38	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 09:38	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/12/12	11/13/12 09:38	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 09:38	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

Chesapeake GeoSciences, Inc., Columbia, MD

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11789 Thomas Spring-Flushed Date/Time Sampled: 11/06/2012 06:45 PSS Sample ID: 12110602-004**  
**Matrix: WATER Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Bromoform	ND	ug/L	5.0		1	11/12/12	11/13/12 10:19	1014
Bromomethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Chlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Chloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Chloroform	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Chloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/12/12	11/13/12 10:19	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Ethylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Naphthalene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Styrene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 10:19	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11789 Thomas Spring-Flushed Date/Time Sampled: 11/06/2012 06:45 PSS Sample ID: 12110602-004**  
**Matrix: WATER Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Trichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
o-Xylene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:19	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/12/12	11/13/12 10:19	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 10:19	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/12/12	11/13/12 10:19	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 10:19	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

Chesapeake GeoSciences, Inc., Columbia, MD

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: T-10**      **Date/Time Sampled: 11/06/2012 03:30**      **PSS Sample ID: 12110602-005**  
**Matrix: WATER**      **Date/Time Received: 11/06/2012 09:45**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Bromoform	ND	ug/L	5.0		1	11/12/12	11/13/12 10:59	1014
Bromomethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Chlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Chloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Chloroform	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Chloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/12/12	11/13/12 10:59	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Ethylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Naphthalene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Styrene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 10:59	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110602

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 20, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-10</b>	<b>Date/Time Sampled: 11/06/2012 03:30</b>	<b>PSS Sample ID: 12110602-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/06/2012 09:45</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Trichloroethene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
o-Xylene	ND	ug/L	0.50		1	11/12/12	11/13/12 10:59	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/12/12	11/13/12 10:59	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 10:59	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/12/12	11/13/12 10:59	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/12/12	11/13/12 10:59	1014



**CHAIN-OF-CUSTODY RECORD**  
 12110602  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Parameters	Preservative/Remarks	PSS Lab ID
	4°C + 1:1 HCl	
	4°C + 1:1 HCl	
	4°C + H HCl	
	4°C + 1:1 HCl	
	4°C + 1:1 HCl	
	Lab Water, com DE water	
	used for T-10 Date: 11/6/12	

Field Sample ID	Date	Time	No. of Containers				Preservative/Remarks
			Water	Soil	Other	VOCs via EPA 524.2	
3806 Green Ridge - First Draw	11/6/12	05:05	X			2	X
3806 Green Ridge - Flushed		05:35	X			2	X
11789 Thomas Spring - First Draw		06:05	X			2	X
11789 Thomas Spring - Flushed		06:45	X			2	X
T-10	11/6/12	03:30	X			2	X

Company Name: Chesapeake GeoSciences, Inc.  
 Project Manager: Sean Daniel  
 Project Name: Monrovia BP /Former Green Valley Citigo (FGVC) (2005-0834FR)  
 Project ID: CG-12-0788.03  
 Sampler(s): Matt Emery  
 P.O. Number: CG12078803SD

Page 15 of 16

Final 1.000. WO#

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>[Signature]</i>	11/6/12 09:45	<i>[Signature]</i>	
Matt Emery		R. DAVIS	
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time

Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12110602	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	11/06/2012 09:45:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	12/11/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	2
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 5

Total No. of Containers Received 10

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 11/06/2012

Rachel Davis

PM Review and Approval:

Date: 11/06/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12120317**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**December 17, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



December 17, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order(s) No: **12120317**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **12120317**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on January 7, 2013. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

Sincerely,

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**  
Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Work Order Number(s): 12120317

Project ID: CG-12-0788.03

The following samples were received under chain of custody by Phase Separation Science (PSS) on 12/03/2012 at 01:25 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12120317-001	T-16	WATER	12/01/12 05:45
12120317-002	3833 Greenridge-First Draw	WATER	12/01/12 07:15
12120317-003	3833 Greenridge-Flushed	WATER	12/01/12 07:35

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect.  
An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Work Order Number(s): 12120317

Project ID: CG-12-0788.03

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

**Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12120317

Chesapeake GeoSciences, Inc., Columbia, MD

December 17, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-16</b>	<b>Date/Time Sampled: 12/01/2012 05:45</b>	<b>PSS Sample ID: 12120317-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 12/03/2012 13:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Bromodichloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Bromoform	ND	ug/L	5.0		1	12/06/12	12/06/12 12:29	1014
Bromomethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Chlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Chloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Chloroform	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Chloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	12/06/12	12/06/12 12:29	1014
Dibromochloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Ethylbenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Isopropylbenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Naphthalene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Styrene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Diisopropyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 12:29	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Tetrachloroethylene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014



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 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12120317

**Chesapeake GeoSciences, Inc., Columbia, MD**

December 17, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-16</b>	<b>Date/Time Sampled: 12/01/2012 05:45</b>	<b>PSS Sample ID: 12120317-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 12/03/2012 13:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Trichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
Vinyl Chloride	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
o-Xylene	ND	ug/L	0.50		1	12/06/12	12/06/12 12:29	1014
m,p-Xylenes	ND	ug/L	1.0		1	12/06/12	12/06/12 12:29	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 12:29	1014
tert-Butyl alcohol	ND	ug/L	20		1	12/06/12	12/06/12 12:29	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 12:29	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12120317

Chesapeake GeoSciences, Inc., Columbia, MD

December 17, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3833 Greenridge-First Draw**    **Date/Time Sampled: 12/01/2012 07:15**    **PSS Sample ID: 12120317-002**  
**Matrix: WATER**    **Date/Time Received: 12/03/2012 13:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Bromodichloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Bromoform	ND	ug/L	5.0		1	12/06/12	12/06/12 13:08	1014
Bromomethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Chlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Chloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Chloroform	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Chloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	12/06/12	12/06/12 13:08	1014
Dibromochloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Ethylbenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Isopropylbenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Naphthalene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Styrene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Diisopropyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 13:08	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Tetrachloroethylene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12120317

**Chesapeake GeoSciences, Inc., Columbia, MD**

December 17, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3833 Greenridge-First Draw      Date/Time Sampled: 12/01/2012 07:15      PSS Sample ID: 12120317-002**  
**Matrix: WATER      Date/Time Received: 12/03/2012 13:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Trichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
Vinyl Chloride	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
o-Xylene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:08	1014
m,p-Xylenes	ND	ug/L	1.0		1	12/06/12	12/06/12 13:08	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 13:08	1014
tert-Butyl alcohol	ND	ug/L	20		1	12/06/12	12/06/12 13:08	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 13:08	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12120317

Chesapeake GeoSciences, Inc., Columbia, MD

December 17, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3833 Greenridge-Flushed**      **Date/Time Sampled: 12/01/2012 07:35**      **PSS Sample ID: 12120317-003**  
**Matrix: WATER**      **Date/Time Received: 12/03/2012 13:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Bromodichloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Bromoform	ND	ug/L	5.0		1	12/06/12	12/06/12 13:48	1014
Bromomethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Chlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Chloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Chloroform	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Chloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	12/06/12	12/06/12 13:48	1014
Dibromochloromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Ethylbenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Isopropylbenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Naphthalene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Styrene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Diisopropyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 13:48	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Tetrachloroethylene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12120317

**Chesapeake GeoSciences, Inc., Columbia, MD**

December 17, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3833 Greenridge-Flushed</b>	<b>Date/Time Sampled: 12/01/2012 07:35</b>	<b>PSS Sample ID: 12120317-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 12/03/2012 13:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Trichloroethene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
Vinyl Chloride	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
o-Xylene	ND	ug/L	0.50		1	12/06/12	12/06/12 13:48	1014
m,p-Xylenes	ND	ug/L	1.0		1	12/06/12	12/06/12 13:48	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 13:48	1014
tert-Butyl alcohol	ND	ug/L	20		1	12/06/12	12/06/12 13:48	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	12/06/12	12/06/12 13:48	1014

**CHAIN-OF-CUSTODY RECORD**  
**12120317**  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Project Manager:  
 Sean Daniel  
 Project ID:  
 CG-12-0788.03  
 P.O. Number:  
 CG12078803SD

Company Name:  
 Chesapeake GeoSciences, Inc.  
 Project Name:  
 Monrovia BP /Former Green Valley  
 Citigo (FGVC) (2005-0834FR)  
 Sampler(s):  
 Matt Emery **Lara Bennett**

Field Sample ID	Date	Time	No. of Containers			Parameters	Preservative/Remarks	PSS Lab ID
			Water	Soil	Other			
T-16	12/1/12	5:45	X				H <sub>2</sub> O + 1:1 HCl	
333 Greenridge - First Draw	12/1/12	7:15	X				H <sub>2</sub> O + 1:1 HCl	
333 Greenridge - Flushed	12/1/12	7:35	X				H <sub>2</sub> O + 1:1 HCl	
<del>DI Water Source: Labwater.com DI Water used for T-16</del>								
<del># of Coolers: Custody Seal: <b>AKS</b> Ice Present: <b>YES</b> Temp: <b>4°C</b> Shipping Carrier: <b>CLUB</b></del>								

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<b>Lara Bennett</b>	12/1/12						
<b>Lara Bennett</b>	9:00						
<b>Matt Emery</b>	12/3/12	<b>Lara Bennett</b>					
<b>Matt Emery</b>	13:25						

Remarks: MDE-OC Level I Deliverables/Rates **RMS 2008 Rates**  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
 and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12120317	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	12/03/2012 01:25:00 PM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	01/07/2013	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Lara Bennett</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 12/03/2012

Rachel Davis

PM Review and Approval:

Date: 12/03/2012

Amy Friedlander



# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12101803**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 1, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 1, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12101803**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12101803**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 22, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101803

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/18/2012 at 10:34 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12101803-001	3923 Rosewood-First Draw	WATER	10/18/2012 07:15
12101803-002	3923 Rosewood-Flushed	WATER	10/18/2012 07:45
12101803-003	T-2	WATER	10/18/2012 06:00

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect.  
An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101803

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101803

Chesapeake GeoSciences, Inc., Columbia, MD

November 1, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3923 Rosewood-First Draw**      **Date/Time Sampled: 10/18/2012 07:15**      **PSS Sample ID: 12101803-001**  
**Matrix: WATER**      **Date/Time Received: 10/18/2012 10:34**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Bromoform	ND	ug/L	5.0		1	10/25/12	10/26/12 00:41	1014
Bromomethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Chlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Chloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Chloroform	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Chloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/25/12	10/26/12 00:41	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Ethylbenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Naphthalene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Styrene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 00:41	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101803

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 1, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3923 Rosewood-First Draw      Date/Time Sampled: 10/18/2012 07:15      PSS Sample ID: 12101803-001**  
**Matrix: WATER      Date/Time Received: 10/18/2012 10:34**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Trichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
o-Xylene	ND	ug/L	0.50		1	10/25/12	10/26/12 00:41	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/25/12	10/26/12 00:41	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 00:41	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/25/12	10/26/12 00:41	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 00:41	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101803

Chesapeake GeoSciences, Inc., Columbia, MD

November 1, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3923 Rosewood-Flushed**      **Date/Time Sampled: 10/18/2012 07:45**      **PSS Sample ID: 12101803-002**  
**Matrix: WATER**      **Date/Time Received: 10/18/2012 10:34**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Bromoform	ND	ug/L	5.0		1	10/25/12	10/26/12 01:23	1014
Bromomethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Chlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Chloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Chloroform	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Chloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/25/12	10/26/12 01:23	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Ethylbenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Methyl-t-butyl ether	1.4	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Naphthalene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Styrene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 01:23	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101803

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 1, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3923 Rosewood-Flushed</b>	<b>Date/Time Sampled: 10/18/2012 07:45</b>	<b>PSS Sample ID: 12101803-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/18/2012 10:34</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Trichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
o-Xylene	ND	ug/L	0.50		1	10/25/12	10/26/12 01:23	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/25/12	10/26/12 01:23	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 01:23	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/25/12	10/26/12 01:23	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 01:23	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101803

Chesapeake GeoSciences, Inc., Columbia, MD

November 1, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-2</b>	<b>Date/Time Sampled: 10/18/2012 06:00</b>	<b>PSS Sample ID: 12101803-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/18/2012 10:34</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Bromoform	ND	ug/L	5.0		1	10/25/12	10/26/12 02:05	1014
Bromomethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Chlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Chloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Chloroform	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Chloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/25/12	10/26/12 02:05	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Ethylbenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Naphthalene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Styrene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 02:05	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101803

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 1, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-2</b>	<b>Date/Time Sampled: 10/18/2012 06:00</b>	<b>PSS Sample ID: 12101803-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/18/2012 10:34</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Trichloroethene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
o-Xylene	ND	ug/L	0.50		1	10/25/12	10/26/12 02:05	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/25/12	10/26/12 02:05	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 02:05	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/25/12	10/26/12 02:05	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/25/12	10/26/12 02:05	1014

**CHAIN-OF-CUSTODY RECORD**  
**12101803**  
Phase Separation Science, Inc.  
6630 Baltimore National Pike, Suite 104-A  
Baltimore, MD 21228  
(410) 747-8770

Company Name: Chesapeake GeoSciences, Inc.		Project Manager: Sean Daniel		Parameters		Preservative/Remarks		PSS Lab ID
Project Name: Monrovia BP /Former Green Valley Cifgo (FGVC) (2005-0834FR)	Project ID: CG-12-0788.03	No. of Containers	Other					
Sampler(s): Lara Bennett	P.O. Number: CG12078803SSD		Soil					
Field Sample ID	Date	Time	Water					
3923 Rosewood - First Draw	10/18/12	07:15	X	X			1:1 HCl + 4°C	
3923 Rosewood - Flushed	10/18/12	07:45	X	X			1:1 HCl + 4°C	
T-2	10/18/12	06:00	X	X			1:1 HCl + 4°C	
							Labwater.com DI Water	
							Dated 10/10/12	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>(Signature)</i>	10/18/12	<i>(Signature)</i>		<i>(Signature)</i>		<i>(Signature)</i>	
Lara Bennett (Printed)	10:34	R. DAUS (Printed)					
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates  
Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
E-mail results to sdnaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12101803	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/18/2012 10:34:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/22/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	9
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Lara Bennett</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 10/18/2012

Rachel Davis

PM Review and Approval:

Date: 10/18/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12110707**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 21, 2012**  
**Phase Separation Science, Inc.**  
**6630 Baltimore National Pike**  
**Baltimore, MD 21228**  
**Phone: (410) 747-8770**  
**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 21, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12110707**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12110707**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on December 12, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

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**Dan Prucnal**

Laboratory Manager





## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110707

The following samples were received under chain of custody by Phase Separation Science (PSS) on 11/07/2012 at 10:50 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12110707-001	T-11	WATER	11/07/2012 05:55
12110707-002	3984A Farm-First Draw	WATER	11/07/2012 07:05
12110707-003	3984A Farm-Flushed	WATER	11/07/2012 07:42
12110707-004	3990 Farm-First Draw	WATER	11/07/2012 08:07
12110707-005	3990 Farm-Flushed	WATER	11/07/2012 08:42

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110707

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-11</b>	<b>Date/Time Sampled: 11/07/2012 05:55</b>	<b>PSS Sample ID: 12110707-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/07/2012 10:50</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Bromoform	ND	ug/L	5.0		1	11/13/12	11/14/12 02:51	1014
Bromomethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Chlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Chloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Chloroform	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Chloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/13/12	11/14/12 02:51	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Ethylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Naphthalene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Styrene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 02:51	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-11</b>	<b>Date/Time Sampled: 11/07/2012 05:55</b>	<b>PSS Sample ID: 12110707-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/07/2012 10:50</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Trichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
o-Xylene	ND	ug/L	0.50		1	11/13/12	11/14/12 02:51	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/13/12	11/14/12 02:51	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 02:51	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/13/12	11/14/12 02:51	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 02:51	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3984A Farm-First Draw**      **Date/Time Sampled: 11/07/2012 07:05**      **PSS Sample ID: 12110707-002**  
**Matrix: WATER**      **Date/Time Received: 11/07/2012 10:50**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Bromoform	ND	ug/L	5.0		1	11/13/12	11/14/12 03:31	1014
Bromomethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Chlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Chloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Chloroform	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Chloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/13/12	11/14/12 03:31	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Ethylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Naphthalene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Styrene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 03:31	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3984A Farm-First Draw</b>	<b>Date/Time Sampled: 11/07/2012 07:05</b>	<b>PSS Sample ID: 12110707-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/07/2012 10:50</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Trichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
o-Xylene	ND	ug/L	0.50		1	11/13/12	11/14/12 03:31	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/13/12	11/14/12 03:31	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 03:31	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/13/12	11/14/12 03:31	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 03:31	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3984A Farm-Flushed**      **Date/Time Sampled: 11/07/2012 07:42**      **PSS Sample ID: 12110707-003**  
**Matrix: WATER**      **Date/Time Received: 11/07/2012 10:50**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Bromoform	ND	ug/L	5.0		1	11/13/12	11/14/12 04:11	1014
Bromomethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Chlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Chloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Chloroform	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Chloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/13/12	11/14/12 04:11	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Ethylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Naphthalene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Styrene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 04:11	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3984A Farm-Flushed</b>	<b>Date/Time Sampled: 11/07/2012 07:42</b>	<b>PSS Sample ID: 12110707-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/07/2012 10:50</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Trichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
o-Xylene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:11	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/13/12	11/14/12 04:11	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 04:11	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/13/12	11/14/12 04:11	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 04:11	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3990 Farm-First Draw**      **Date/Time Sampled: 11/07/2012 08:07**      **PSS Sample ID: 12110707-004**  
**Matrix: WATER**      **Date/Time Received: 11/07/2012 10:50**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Bromoform	ND	ug/L	5.0		1	11/13/12	11/14/12 04:51	1014
Bromomethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Chlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Chloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Chloroform	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Chloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/13/12	11/14/12 04:51	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Ethylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Naphthalene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Styrene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 04:51	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3990 Farm-First Draw</b>	<b>Date/Time Sampled: 11/07/2012 08:07</b>	<b>PSS Sample ID: 12110707-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/07/2012 10:50</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Trichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
o-Xylene	ND	ug/L	0.50		1	11/13/12	11/14/12 04:51	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/13/12	11/14/12 04:51	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 04:51	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/13/12	11/14/12 04:51	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 04:51	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3990 Farm-Flushed**      **Date/Time Sampled: 11/07/2012 08:42**      **PSS Sample ID: 12110707-005**  
**Matrix: WATER**      **Date/Time Received: 11/07/2012 10:50**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Bromoform	ND	ug/L	5.0		1	11/13/12	11/14/12 05:30	1014
Bromomethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Chlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Chloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Chloroform	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Chloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/13/12	11/14/12 05:30	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Ethylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Methyl-t-butyl ether	<b>610</b>	ug/L	10		20	11/13/12	11/15/12 17:59	1014
Naphthalene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Styrene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Diisopropyl ether	<b>5.6</b>	ug/L	5.0		1	11/13/12	11/14/12 05:30	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110707

Chesapeake GeoSciences, Inc., Columbia, MD

November 21, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3990 Farm-Flushed</b>	<b>Date/Time Sampled: 11/07/2012 08:42</b>	<b>PSS Sample ID: 12110707-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/07/2012 10:50</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Trichloroethene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
o-Xylene	ND	ug/L	0.50		1	11/13/12	11/14/12 05:30	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/13/12	11/14/12 05:30	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/13/12	11/14/12 05:30	1014
tert-Butyl alcohol	<b>130</b>	ug/L	20		1	11/13/12	11/14/12 05:30	1014
tert-Amyl methyl ether	<b>13</b>	ug/L	5.0		1	11/13/12	11/14/12 05:30	1014

**Company Name:** Chesapeake GeoSciences, Inc.  
**Project Name:** Monrovia BP /Former Green Valley Citgo (FGVC) (2005-0834FR)  
**Sampler(s):** Lara Bennett  
**Project Manager:** Sean Daniel  
**Project ID:** CG-12-0788.03  
**P.O. Number:** CG12078803SD

Field Sample ID	Date	Time	No. of Containers			Parameters	Preservative/Remarks	PSS Lab ID
			Water	Soil	Other			
T-11	11/7/12	05:55	X		X		1:1 HCl + 4°C	
3984A Farm - First Draw	11/7/12	07:05	X		X		1:1 HCl + 4°C	
3984A Farm - Flushed	11/7/12	07:42	X		X		1:1 HCl + 4°C	
3990 Farm - First Draw	11/7/12	08:07	X		X		1:1 HCl + 4°C	
3990 Farm - Flushed	11/7/12	08:42	X		X		1:1 HCl + 4°C	

CHAIN-OF-CUSTODY RECORD  
 12110707  
 Phase Separation Science, Inc.  
 663Q Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

VOCs via EPA 524.2

# of Coolers: 1  
 Custody Seal: ABS  
 Ice Present: Yes Temp: 8°C  
 Shipping Carrier: GLEN

Relinquished by: (Signature) *[Signature]* Date/Time  
 Received by: (Signature) *[Signature]* Date/Time  
 Relinquished by: (Printed) R. DAVIS Date/Time  
 Received by: (Printed) R. DAVIS Date/Time

Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
 and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12110707	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	11/07/2012 10:50:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	12/12/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	8
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Lara Bennett</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 5

Total No. of Containers Received 10

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 11/07/2012

Rachel Davis

PM Review and Approval:

Date: 11/07/2012

Amy Friedlander



# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12111404**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 30, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

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# PHASE SEPARATION SCIENCE, INC.



November 30, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order(s) No: **12111404**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **12111404**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on December 19, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

Sincerely,

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**  
Laboratory Manager



# Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Work Order Number(s): 12111404

Project ID: CG-12-0788.03

The following samples were received under chain of custody by Phase Separation Science (PSS) on 11/14/2012 at 10:25 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12111404-001	3985 Farm-First Draw	WATER	11/13/12 15:00
12111404-002	3985 Farm-Flushed	WATER	11/13/12 15:30
12111404-003	3933 Rosewood-First Draw	WATER	11/13/12 15:55
12111404-004	3933 Rosewood-Flushed	WATER	11/13/12 16:30
12111404-005	11894 Barley-First Draw	WATER	11/13/12 16:55
12111404-006	11894 Barley-Flushed	WATER	11/13/12 17:30
12111404-007	T-14	WATER	11/13/12 11:30

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.

Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect.  
An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Work Order Number(s): 12111404

Project ID: CG-12-0788.03

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

**Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

Chesapeake GeoSciences, Inc., Columbia, MD

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3985 Farm-First Draw**      **Date/Time Sampled: 11/13/2012 15:00**      **PSS Sample ID: 12111404-001**  
**Matrix: WATER**      **Date/Time Received: 11/14/2012 10:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Bromoform	ND	ug/L	5.0		1	11/21/12	11/22/12 12:10	1014
Bromomethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Chlorobenzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Chloroethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Chloroform	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Chloromethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/21/12	11/22/12 12:10	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Ethylbenzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Naphthalene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Styrene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/21/12	11/22/12 12:10	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3985 Farm-First Draw</b>	<b>Date/Time Sampled: 11/13/2012 15:00</b>	<b>PSS Sample ID: 12111404-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/14/2012 10:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Trichloroethene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
o-Xylene	ND	ug/L	0.50		1	11/21/12	11/22/12 12:10	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/21/12	11/22/12 12:10	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/21/12	11/22/12 12:10	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/21/12	11/22/12 12:10	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/21/12	11/22/12 12:10	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

Chesapeake GeoSciences, Inc., Columbia, MD

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3985 Farm-Flushed**      **Date/Time Sampled: 11/13/2012 15:30**      **PSS Sample ID: 12111404-002**  
**Matrix: WATER**      **Date/Time Received: 11/14/2012 10:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 18:34	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Chloroform	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 18:34	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 18:34	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3985 Farm-Flushed</b>	<b>Date/Time Sampled: 11/13/2012 15:30</b>	<b>PSS Sample ID: 12111404-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/14/2012 10:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 18:34	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 18:34	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 18:34	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 18:34	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 18:34	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

Chesapeake GeoSciences, Inc., Columbia, MD

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3933 Rosewood-First Draw      Date/Time Sampled: 11/13/2012 15:55      PSS Sample ID: 12111404-003**  
**Matrix: WATER      Date/Time Received: 11/14/2012 10:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 19:14	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Chloroform	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 19:14	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 19:14	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3933 Rosewood-First Draw      Date/Time Sampled: 11/13/2012 15:55      PSS Sample ID: 12111404-003**  
**Matrix: WATER      Date/Time Received: 11/14/2012 10:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:14	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 19:14	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 19:14	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 19:14	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 19:14	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

Chesapeake GeoSciences, Inc., Columbia, MD

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3933 Rosewood-Flushed**      **Date/Time Sampled: 11/13/2012 16:30**      **PSS Sample ID: 12111404-004**  
**Matrix: WATER**      **Date/Time Received: 11/14/2012 10:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 19:54	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Chloroform	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 19:54	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 19:54	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3933 Rosewood-Flushed</b>	<b>Date/Time Sampled: 11/13/2012 16:30</b>	<b>PSS Sample ID: 12111404-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/14/2012 10:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 19:54	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 19:54	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 19:54	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 19:54	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 19:54	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

Chesapeake GeoSciences, Inc., Columbia, MD

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11894 Barley-First Draw**      **Date/Time Sampled: 11/13/2012 16:55**      **PSS Sample ID: 12111404-005**  
**Matrix: WATER**      **Date/Time Received: 11/14/2012 10:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 20:34	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Chloroform	<b>0.56</b>	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 20:34	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 20:34	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 11894 Barley-First Draw</b>	<b>Date/Time Sampled: 11/13/2012 16:55</b>	<b>PSS Sample ID: 12111404-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/14/2012 10:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 20:34	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 20:34	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 20:34	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 20:34	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 20:34	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

Chesapeake GeoSciences, Inc., Columbia, MD

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 11894 Barley-Flushed**      **Date/Time Sampled: 11/13/2012 17:30**      **PSS Sample ID: 12111404-006**  
**Matrix: WATER**      **Date/Time Received: 11/14/2012 10:25**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 21:14	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Chloroform	<b>0.59</b>	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 21:14	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 21:14	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 11894 Barley-Flushed</b>	<b>Date/Time Sampled: 11/13/2012 17:30</b>	<b>PSS Sample ID: 12111404-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/14/2012 10:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:14	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 21:14	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 21:14	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 21:14	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 21:14	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

Chesapeake GeoSciences, Inc., Columbia, MD

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-14</b>	<b>Date/Time Sampled: 11/13/2012 11:30</b>	<b>PSS Sample ID: 12111404-007</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/14/2012 10:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 17:54	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Chloroform	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 17:54	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 17:54	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111404

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 30, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-14</b>	<b>Date/Time Sampled: 11/13/2012 11:30</b>	<b>PSS Sample ID: 12111404-007</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/14/2012 10:25</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 17:54	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 17:54	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 17:54	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 17:54	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 17:54	1014

**CHAIN-OF-CUSTODY RECORD**  
 12111404  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Company Name: Chesapeake GeoSciences, Inc.  
 Project Manager: Sean Daniel  
 Project Name: Monrovia BP /Former Green Valley Citing (FGVC) (2005-0834FR)  
 Project ID: CG-12-0788.03  
 Sampler(s): Matt Emery  
 P.O. Number: CG12078803SD

Field Sample ID	Date	Time	No. of Containers			Preservative/Remarks	PSS Lab ID
			Water	Soil	Other		
3985 Farm- First Draw	11/13/12	15:00	X			40C + 1:1 HCl	
3985 Farm- Flushed		15:30	X			40C + 1:1 HCl	
3933 Rosewood - First Draw		15:55	X			40C + 1:1 HCl	
3933 Rosewood - Flushed		16:30	X			40C + 1:1 HCl	
11894 Barley- First Draw		16:55	X			40C + 1:1 HCl	
11894 Barley- Flushed		17:30	X			40C + 1:1 HCl	
T-14	11/13/12	11:30	X			40C + 1:1 HCl	
						Labwater.com OI water	
						used for T-14	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>Matt Emery</i>	11/14/12	<i>[Signature]</i>	
(Printed) Matt Emery	10:25	(Printed) R. DAVIS	
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time
(Printed)		(Printed)	



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12111404	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	11/14/2012 10:25:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	12/19/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 7

Total No. of Containers Received 14

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 11/14/2012

Rachel Davis

PM Review and Approval:

Date: 11/14/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12110937**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 27, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**



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# PHASE SEPARATION SCIENCE, INC.



November 27, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12110937**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12110937**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on December 14, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**  
Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110937

The following samples were received under chain of custody by Phase Separation Science (PSS) on 11/09/2012 at 04:55 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12110937-001	3987 Farm-First Draw	WATER	11/09/2012 14:00
12110937-002	3987 Farm-Flushed	WATER	11/09/2012 14:35
12110937-003	T-13	WATER	11/09/2012 12:05

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect.  
An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110937

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110937

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3987 Farm-First Draw**      **Date/Time Sampled: 11/09/2012 14:00**      **PSS Sample ID: 12110937-001**  
**Matrix: WATER**      **Date/Time Received: 11/09/2012 16:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/16/12 07:14	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/16/12 07:14	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 07:14	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014

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 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110937

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3987 Farm-First Draw</b>	<b>Date/Time Sampled: 11/09/2012 14:00</b>	<b>PSS Sample ID: 12110937-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 16:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:14	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/16/12 07:14	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 07:14	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/16/12 07:14	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 07:14	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110937

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3987 Farm-Flushed**      **Date/Time Sampled: 11/09/2012 14:35**      **PSS Sample ID: 12110937-002**  
**Matrix: WATER**      **Date/Time Received: 11/09/2012 16:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/16/12 07:54	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/16/12 07:54	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 07:54	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110937

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3987 Farm-Flushed</b>	<b>Date/Time Sampled: 11/09/2012 14:35</b>	<b>PSS Sample ID: 12110937-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 16:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/16/12 07:54	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/16/12 07:54	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 07:54	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/16/12 07:54	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 07:54	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110937

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-13</b>	<b>Date/Time Sampled: 11/09/2012 12:05</b>	<b>PSS Sample ID: 12110937-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 16:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/16/12 06:34	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/16/12 06:34	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 06:34	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110937

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-13</b>	<b>Date/Time Sampled: 11/09/2012 12:05</b>	<b>PSS Sample ID: 12110937-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 16:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/16/12 06:34	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/16/12 06:34	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 06:34	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/16/12 06:34	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/16/12 06:34	1014

**Company Name:** Chesapeake GeoSciences, Inc.  
**Project Name:** Monrovia BP /Former Green Valley Cito (FGVC) (2005-0834FR)  
**Sampler(s):** Matt Emery  
**Project Manager:** Sean Daniel  
**Project ID:** CG-12-0788.03  
**P.O. Number:** CG12078803SD

Field Sample ID	Date	Time	No. of Containers			Preservative/Remarks	PSS Lab ID
			Water	Soil	Other		
3987 Farm - First Draw	11/9/12	14:00	X			4°C + 1:1 HCl	
3987 Farm - Flushed	11/9/12	14:35	X			4°C + 1:1 HCl	
T-13	11/9/12	12:05	X			4°C + 1:1 HCl	
						Labyrinth.com OI water	
						used for T-13	

**Chain-of-Custody Record**  
 12110937  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

**Parameters:**

**Relinquished by: (Signature)** *[Signature]*  
**Date/Time:** 10/9/12  
**Received by: (Signature)** *[Signature]*  
**Date/Time:** 17:00

**Relinquished by: (Signature)** *[Signature]*  
**Date/Time:** 17:00  
**Received by: (Signature)** R. DAVIS 1655  
**Date/Time:**

**Remarks:** MDE-OC Level I Deliverables/Rates RMS 2008 Rates  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12110937	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	11/09/2012 04:55:00 PM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	12/14/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	8
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 11/09/2012

Rachel Davis

PM Review and Approval:

Date: 11/11/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12101902**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 2, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 2, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12101902**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12101902**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 23, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



# Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101902

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/19/2012 at 10:05 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12101902-001	3989 Farm-First Draw	WATER	10/19/2012 06:10
12101902-002	3989 Farm-Flushed	WATER	10/19/2012 06:40
12101902-003	T-4	WATER	10/19/2012 05:00
12101902-004	3989 Farm-FB	WATER	10/19/2012 06:55

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.





# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101902

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3989 Farm-First Draw</b>	<b>Date/Time Sampled: 10/19/2012 06:10</b>	<b>PSS Sample ID: 12101902-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Bromoform	ND	ug/L	5.0		1	10/26/12	10/26/12 12:47	1014
Bromomethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Chlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Chloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Chloroform	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Chloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/26/12	10/26/12 12:47	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Ethylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Naphthalene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Styrene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 12:47	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3989 Farm-First Draw</b>	<b>Date/Time Sampled: 10/19/2012 06:10</b>	<b>PSS Sample ID: 12101902-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Trichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
o-Xylene	ND	ug/L	0.50		1	10/26/12	10/26/12 12:47	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/26/12	10/26/12 12:47	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 12:47	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/26/12	10/26/12 12:47	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 12:47	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3989 Farm-Flushed**      **Date/Time Sampled: 10/19/2012 06:40**      **PSS Sample ID: 12101902-002**  
**Matrix: WATER**      **Date/Time Received: 10/19/2012 10:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Bromoform	ND	ug/L	5.0		1	10/26/12	10/26/12 13:28	1014
Bromomethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Chlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Chloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Chloroform	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Chloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/26/12	10/26/12 13:28	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Ethylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Naphthalene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Styrene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 13:28	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3989 Farm-Flushed</b>	<b>Date/Time Sampled: 10/19/2012 06:40</b>	<b>PSS Sample ID: 12101902-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Trichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
o-Xylene	ND	ug/L	0.50		1	10/26/12	10/26/12 13:28	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/26/12	10/26/12 13:28	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 13:28	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/26/12	10/26/12 13:28	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 13:28	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-4</b>	<b>Date/Time Sampled: 10/19/2012 05:00</b>	<b>PSS Sample ID: 12101902-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Bromoform	ND	ug/L	5.0		1	10/26/12	10/26/12 14:10	1014
Bromomethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Chlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Chloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Chloroform	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Chloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/26/12	10/26/12 14:10	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Ethylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Naphthalene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Styrene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 14:10	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-4</b>	<b>Date/Time Sampled: 10/19/2012 05:00</b>	<b>PSS Sample ID: 12101902-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Trichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
o-Xylene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:10	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/26/12	10/26/12 14:10	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 14:10	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/26/12	10/26/12 14:10	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 14:10	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3989 Farm-FB**      **Date/Time Sampled: 10/19/2012 06:55**      **PSS Sample ID: 12101902-004**  
**Matrix: WATER**      **Date/Time Received: 10/19/2012 10:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Bromoform	ND	ug/L	5.0		1	10/26/12	10/26/12 14:51	1014
Bromomethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Chlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Chloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Chloroform	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Chloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/26/12	10/26/12 14:51	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Ethylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Naphthalene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Styrene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 14:51	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101902

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3989 Farm-FB</b>	<b>Date/Time Sampled: 10/19/2012 06:55</b>	<b>PSS Sample ID: 12101902-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Trichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
o-Xylene	ND	ug/L	0.50		1	10/26/12	10/26/12 14:51	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/26/12	10/26/12 14:51	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 14:51	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/26/12	10/26/12 14:51	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 14:51	1014

Company Name: Chesapeake GeoSciences, Inc.  
 Project Name: Monrovia BP /Former Green Valley Cigo (FGVC) (2005-0834FR)  
 Sampler(s): Matt Emery  
 Project Manager: Sean Daniel  
 Project ID: CG-12-0788.03  
 P.O. Number: CG12078803SD

Field Sample ID	Date	Time	No. of Containers			Preservative/Remarks	PSS Lab ID
			Water	Soil	Other		
3989 Farm - First Draw	10/19/12	06:10	X				
3989 Farm - Flushed	10/19/12	06:40	X				
T-4	10/19/12	05:00	X				
3989 Farm - FB	10/19/12	06:55	X				

Parameters  
 Vocs via EPA 524.2

Received by: (Signature) *[Signature]*  
 (Printed) R DAVIS  
 Date/Time 10/19/12 10:05  
 Relinquished by: (Signature) *[Signature]*  
 (Printed) Matt Emery

Received by Laboratory: (Signature) *[Signature]*  
 (Printed)  
 Date/Time

Relinquished by: (Signature) *[Signature]*  
 (Printed)  
 Date/Time

Received by: (Signature)  
 (Printed)  
 Date/Time

Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12101902	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/19/2012 10:05:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/23/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	15
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 4

Total No. of Containers Received 8

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 10/19/2012

Rachel Davis

PM Review and Approval:

Date: 10/19/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12111513**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**December 3, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



December 3, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order(s) No: **12111513**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order(s) numbered **12111513**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on December 20, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

Sincerely,

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**  
Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Work Order Number(s): 12111513

Project ID: CG-12-0788.03

The following samples were received under chain of custody by Phase Separation Science (PSS) on 11/15/2012 at 02:05 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12111513-001	3991 Farm-First Draw	WATER	11/14/12 17:20
12111513-002	3991 Farm-Flushed	WATER	11/14/12 17:50
12111513-003	T-15	WATER	11/14/12 15:15

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of a common laboratory contaminant such as methylene chloride may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.
5. The analyses of chlorine, pH, dissolved oxygen, temperature and sulfite for non-potable water samples tested for compliance for Virginia Pollution Discharge Elimination System (VDPES) permits and Virginia Pollutant Abatement (VPA) permits, have a maximum holding time of 15 minutes established by 40CFR136.3.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect.  
An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.





# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Work Order Number(s): 12111513

Project ID: CG-12-0788.03

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### Sample Receipt:

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111513

Chesapeake GeoSciences, Inc., Columbia, MD

December 3, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3991 Farm-First Draw**      **Date/Time Sampled: 11/14/2012 17:20**      **PSS Sample ID: 12111513-001**  
**Matrix: WATER**      **Date/Time Received: 11/15/2012 14:05**

VOC In Drinking Water plus Oxygenates      Analytical Method: EPA 524.2      Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 21:54	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Chloroform	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 21:54	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 21:54	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111513

**Chesapeake GeoSciences, Inc., Columbia, MD**

December 3, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3991 Farm-First Draw</b>	<b>Date/Time Sampled: 11/14/2012 17:20</b>	<b>PSS Sample ID: 12111513-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/15/2012 14:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 21:54	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 21:54	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 21:54	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 21:54	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 21:54	1014

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 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111513

Chesapeake GeoSciences, Inc., Columbia, MD

December 3, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3991 Farm-Flushed**      **Date/Time Sampled: 11/14/2012 17:50**      **PSS Sample ID: 12111513-002**  
**Matrix: WATER**      **Date/Time Received: 11/15/2012 14:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 22:33	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Chloroform	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 22:33	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 22:33	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111513

**Chesapeake GeoSciences, Inc., Columbia, MD**

December 3, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3991 Farm-Flushed</b>	<b>Date/Time Sampled: 11/14/2012 17:50</b>	<b>PSS Sample ID: 12111513-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/15/2012 14:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 22:33	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 22:33	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 22:33	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 22:33	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 22:33	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111513

Chesapeake GeoSciences, Inc., Columbia, MD

December 3, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: T-15**      **Date/Time Sampled: 11/14/2012 15:15**      **PSS Sample ID: 12111513-003**  
**Matrix: WATER**      **Date/Time Received: 11/15/2012 14:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Bromoform	ND	ug/L	5.0		1	11/22/12	11/22/12 23:13	1014
Bromomethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Chlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Chloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Chloroform	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Chloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/22/12	11/22/12 23:13	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Ethylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Naphthalene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Styrene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 23:13	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12111513

**Chesapeake GeoSciences, Inc., Columbia, MD**

December 3, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-15</b>	<b>Date/Time Sampled: 11/14/2012 15:15</b>	<b>PSS Sample ID: 12111513-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/15/2012 14:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Trichloroethene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
o-Xylene	ND	ug/L	0.50		1	11/22/12	11/22/12 23:13	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/22/12	11/22/12 23:13	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 23:13	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/22/12	11/22/12 23:13	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/22/12	11/22/12 23:13	1014



**CHAIN-OF-CUSTODY RECORD**  
 1211513  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Preservative/Remarks	PSS Lab ID
4% + 1:1 HCL	
4% + 1:1 HCL	
4% + 1:1 HCL	
Labwater.com DE water used for T-15.	

# of Coolers:	ABS
Custody Seal:	PRES
Ice Present:	Temp: 6°C
Shipping Carrier:	CLIENT

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	Parameters
3991 Farm-First Draw	11/14/12	17:20	X			2	
3991 Farm-Flushed	11/14/12	17:50	X			2	
T-15	11/14/12	15:15	X			2	

Project Manager: Sean Daniel		
Project ID: CG-12-0788.03		
P.O. Number: CG12078803SD		
Company Name: Chesapeake GeoSciences, Inc.	Sampler(s): Matt Emery	Project Name: Monrovia BP /Former Green Valley Citgo (FGVC) (2005-0834FR)

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
(Printed)		(Printed)	

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
(Printed)		(Printed)	

Remarks: MDE-OC Level I Deliverables/Rates **RMS 2008 Rates**  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
 and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to saniel@ogs.us.com

1  
2  
3



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12111513	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	11/15/2012 02:05:00 PM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	12/20/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	6
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 11/15/2012

Rachel Davis

PM Review and Approval:

Date: 11/15/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12102505**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 8, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 8, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12102505**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12102505**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 29, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102505

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/25/2012 at 10:55 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12102505-001	3993 Farm-First Draw	WATER	10/25/2012 07:05
12102505-002	3993 Farm-Flushed	WATER	10/25/2012 07:40
12102505-003	T-8	WATER	10/25/2012 06:05

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect.  
An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102505

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

## Sample Receipt:

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102505

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3993 Farm-First Draw**      **Date/Time Sampled: 10/25/2012 07:05**      **PSS Sample ID: 12102505-001**  
**Matrix: WATER**      **Date/Time Received: 10/25/2012 10:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 10:59	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 10:59	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 10:59	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102505

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3993 Farm-First Draw</b>	<b>Date/Time Sampled: 10/25/2012 07:05</b>	<b>PSS Sample ID: 12102505-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 10:59	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 10:59	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 10:59	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 10:59	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 10:59	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102505

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3993 Farm-Flushed**      **Date/Time Sampled: 10/25/2012 07:40**      **PSS Sample ID: 12102505-002**  
**Matrix: WATER**      **Date/Time Received: 10/25/2012 10:55**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Bromoform	ND	ug/L	5.0		1	10/28/12	10/29/12 11:42	1014
Bromomethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Chlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Chloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Chloroform	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Chloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/28/12	10/29/12 11:42	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Ethylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Naphthalene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Styrene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 11:42	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102505

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3993 Farm-Flushed</b>	<b>Date/Time Sampled: 10/25/2012 07:40</b>	<b>PSS Sample ID: 12102505-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Trichloroethene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
o-Xylene	ND	ug/L	0.50		1	10/28/12	10/29/12 11:42	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/28/12	10/29/12 11:42	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 11:42	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/28/12	10/29/12 11:42	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/28/12	10/29/12 11:42	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102505

Chesapeake GeoSciences, Inc., Columbia, MD

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-8</b>	<b>Date/Time Sampled: 10/25/2012 06:05</b>	<b>PSS Sample ID: 12102505-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Bromoform	ND	ug/L	5.0		1	11/01/12	11/01/12 23:36	1014
Bromomethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Chlorobenzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Chloroethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Chloroform	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Chloromethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/01/12	11/01/12 23:36	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Ethylbenzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Naphthalene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Styrene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/01/12	11/01/12 23:36	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102505

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 8, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-8</b>	<b>Date/Time Sampled: 10/25/2012 06:05</b>	<b>PSS Sample ID: 12102505-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/25/2012 10:55</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Trichloroethene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
o-Xylene	ND	ug/L	0.50		1	11/01/12	11/01/12 23:36	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/01/12	11/01/12 23:36	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/01/12	11/01/12 23:36	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/01/12	11/01/12 23:36	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/01/12	11/01/12 23:36	1014

**CHAIN-OF-CUSTODY RECORD**  
 12102505  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

**Project Manager:**  
 Sean Daniel

**Project ID:**  
 CG-12-0788.03

**P.O. Number:**  
 CG12078803SD

**Company Name:**  
 Chesapeake GeoSciences, Inc.

**Project Name:**  
 Monrovia BP /Former Green Valley  
 Cigo (FGVC) (2005-0834FR)

**Sampler(s):**  
 Matt Emery  
 Tara Bennett

Field Sample ID	Date	Time	No. of Containers			Preservative/Remarks	PSS Lab ID
			Water	Soil	Other		
3993 farm - first draw	10/25/12	07:05	X		2	4°C + 1:1 HCl	
3993 farm - flushed	10/25/12	07:46	X		2	4°C + 1:1 HCl	
T-8	10/25/12	06:05	X		2	4°C + 1:1 HCl	
Lab Water.com DI water used for T-8.							
# of Coefers: 1 Custody Seal: ABS Ice Present: PIES Temp: 4°C Shipping Carrier: DUEANT							

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>Matt Emery</i>	10/25/12	<i>[Signature]</i>	10:55				
<i>Matt Emery</i>		<i>R. PAULS</i>					

Remarks: MDE-OCF Level I Deliverables/Rates RMS 2008 Rates  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
 and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12102505	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/25/2012 10:55:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/29/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	4
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 10/25/2012

Rachel Davis

PM Review and Approval:

Date: 10/25/2012

Amy Friedlander



# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12110915**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 27, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 27, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12110915**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12110915**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on December 14, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



# Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110915

The following samples were received under chain of custody by Phase Separation Science (PSS) on 11/09/2012 at 12:20 pm

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12110915-001	3994 Farm-First Draw	WATER	11/09/2012 06:05
12110915-002	3994 Farm-Flushed	WATER	11/09/2012 06:43
12110915-003	3994 Farm-Flushed DB	WATER	11/09/2012 00:00
12110915-004	3992 Farm-First Draw	WATER	11/09/2012 07:15
12110915-005	3992 Farm-Flushed	WATER	11/09/2012 07:52
12110915-006	T-12	WATER	11/09/2012 04:55

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12110915

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

Container label for COC sample 3994 Farm-First Draw reads 3996 Farm-First Draw. Sampling date and time match.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3994 Farm-First Draw</b>	<b>Date/Time Sampled: 11/09/2012 06:05</b>	<b>PSS Sample ID: 12110915-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/15/12 21:18	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Chloromethane	<b>1.0</b>	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/15/12 21:18	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 21:18	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3994 Farm-First Draw</b>	<b>Date/Time Sampled: 11/09/2012 06:05</b>	<b>PSS Sample ID: 12110915-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:18	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/15/12 21:18	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 21:18	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/15/12 21:18	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 21:18	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3994 Farm-Flushed**      **Date/Time Sampled: 11/09/2012 06:43**      **PSS Sample ID: 12110915-002**  
**Matrix: WATER**      **Date/Time Received: 11/09/2012 12:20**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/15/12 21:58	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/15/12 21:58	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Methyl-t-butyl ether	150	ug/L	5.0		10	11/15/12	11/16/12 10:33	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 21:58	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3994 Farm-Flushed</b>	<b>Date/Time Sampled: 11/09/2012 06:43</b>	<b>PSS Sample ID: 12110915-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/15/12 21:58	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/15/12 21:58	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 21:58	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/15/12 21:58	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 21:58	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3994 Farm-Flushed DB**      **Date/Time Sampled: 11/09/2012 00:00**      **PSS Sample ID: 12110915-003**  
**Matrix: WATER**      **Date/Time Received: 11/09/2012 12:20**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/15/12 22:38	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/15/12 22:38	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Methyl-t-butyl ether	<b>160</b>	ug/L	5.0		10	11/15/12	11/16/12 11:12	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 22:38	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3994 Farm-Flushed DB</b>	<b>Date/Time Sampled: 11/09/2012 00:00</b>	<b>PSS Sample ID: 12110915-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/15/12 22:38	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/15/12 22:38	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 22:38	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/15/12 22:38	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 22:38	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3992 Farm-First Draw**      **Date/Time Sampled: 11/09/2012 07:15**      **PSS Sample ID: 12110915-004**  
**Matrix: WATER**      **Date/Time Received: 11/09/2012 12:20**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/15/12 23:17	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/15/12 23:17	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 23:17	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3992 Farm-First Draw</b>	<b>Date/Time Sampled: 11/09/2012 07:15</b>	<b>PSS Sample ID: 12110915-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:17	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/15/12 23:17	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 23:17	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/15/12 23:17	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 23:17	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3992 Farm-Flushed**      **Date/Time Sampled: 11/09/2012 07:52**      **PSS Sample ID: 12110915-005**  
**Matrix: WATER**      **Date/Time Received: 11/09/2012 12:20**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/15/12 23:57	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/15/12 23:57	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Methyl-t-butyl ether	<b>190</b>	ug/L	5.0		10	11/15/12	11/16/12 12:32	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 23:57	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3992 Farm-Flushed</b>	<b>Date/Time Sampled: 11/09/2012 07:52</b>	<b>PSS Sample ID: 12110915-005</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/15/12 23:57	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/15/12 23:57	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 23:57	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/15/12 23:57	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 23:57	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

Chesapeake GeoSciences, Inc., Columbia, MD

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-12</b>	<b>Date/Time Sampled: 11/09/2012 04:55</b>	<b>PSS Sample ID: 12110915-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Bromoform	ND	ug/L	5.0		1	11/15/12	11/15/12 20:38	1014
Bromomethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Chlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Chloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Chloroform	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Chloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/15/12	11/15/12 20:38	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Ethylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Naphthalene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Styrene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 20:38	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12110915

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 27, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-12</b>	<b>Date/Time Sampled: 11/09/2012 04:55</b>	<b>PSS Sample ID: 12110915-006</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 11/09/2012 12:20</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Trichloroethene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
o-Xylene	ND	ug/L	0.50		1	11/15/12	11/15/12 20:38	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/15/12	11/15/12 20:38	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 20:38	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/15/12	11/15/12 20:38	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/15/12	11/15/12 20:38	1014

**CHAIN-OF-CUSTODY RECORD**

12110915

Phase Separation Science, Inc.  
6630 Baltimore National Pike, Suite 104-A  
Baltimore, MD 21228  
(410) 747-8770

PSS Lab ID

**Parameters**

Preservative/Remarks

PSS Lab ID

HCl + 4°C

HCl + 4°C

HCl + 4°C

HCl + 4°C

HCl + 4°C

HCl + 4°C

HCl + 4°C

# of Coolers: 1

Custody Seal: ABS

Ice Present: YES Temp: 5°C

Shipping Carrier: CROWN

Project Manager:  
Sean Daniel

Project ID:  
CG-12-0788.03

P.O. Number:  
CG12078803SD

No. of Containers

Water

Soil

Other

Date

Time

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

X

Field Sample ID

3994 Farm - First Draw

3994 Farm - Flushed

3994 Farm - Flushed DB

3992 Farm - First Draw

3992 Farm - Flushed

7-12

11/9/12

6:05

6:43

---

7:15

7:52

11/9/12

04:55

Relinquished by: (Signature)

Lara Bennett

Date/Time

11/9/12 12:20

Received by: (Signature)

[Signature]

(Printed)

R. DAVIS

Relinquished by: (Signature)

(Printed)

Date/Time

Received by: (Signature)

(Printed)

Relinquished by: (Signature)

Date/Time

Received by Laboratory: (Signature)

(Printed)

Date/Time

Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates  
Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
E-mail results to sdaniel@cgcs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12110915	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	11/09/2012 12:20:00 PM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	12/14/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	5
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Lara Bennett</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 6

Total No. of Containers Received 12

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Container label for COC sample 3994 Farm-First Draw reads 3996 Farm-First Draw. Sampling date and time match.

Samples Inspected/Checklist Completed By:

Date: 11/09/2012

Rachel Davis

PM Review and Approval:

Date: 11/11/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12102316**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 6, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 6, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12102316**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12102316**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 27, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

---

**Dan Prucnal**

Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102316

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/23/2012 at 11:00 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12102316-001	T-5	WATER	10/23/2012 06:50
12102316-002	3997 Farm-First Draw	WATER	10/23/2012 08:00
12102316-003	3997 Farm-Flushed	WATER	10/23/2012 08:40

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.





# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102316

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

## Sample Receipt:

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
 ROUTE 40 WEST  
 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102316

Chesapeake GeoSciences, Inc., Columbia, MD

November 6, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-5</b>	<b>Date/Time Sampled: 10/23/2012 06:50</b>	<b>PSS Sample ID: 12102316-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/23/2012 11:00</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Bromoform	ND	ug/L	5.0		1	10/27/12	10/28/12 04:34	1014
Bromomethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Chlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Chloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Chloroform	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Chloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/27/12	10/28/12 04:34	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Ethylbenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Naphthalene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Styrene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 04:34	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014

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 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102316

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 6, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-5</b>	<b>Date/Time Sampled: 10/23/2012 06:50</b>	<b>PSS Sample ID: 12102316-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/23/2012 11:00</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Trichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
o-Xylene	ND	ug/L	0.50		1	10/27/12	10/28/12 04:34	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/27/12	10/28/12 04:34	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 04:34	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/27/12	10/28/12 04:34	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 04:34	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102316

Chesapeake GeoSciences, Inc., Columbia, MD

November 6, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3997 Farm-First Draw**      **Date/Time Sampled: 10/23/2012 08:00**      **PSS Sample ID: 12102316-002**  
**Matrix: WATER**      **Date/Time Received: 10/23/2012 11:00**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Bromoform	ND	ug/L	5.0		1	10/27/12	10/28/12 05:16	1014
Bromomethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Chlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Chloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Chloroform	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Chloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/27/12	10/28/12 05:16	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Ethylbenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Naphthalene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Styrene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 05:16	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014

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 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102316

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 6, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3997 Farm-First Draw</b>	<b>Date/Time Sampled: 10/23/2012 08:00</b>	<b>PSS Sample ID: 12102316-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/23/2012 11:00</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Trichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
o-Xylene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:16	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/27/12	10/28/12 05:16	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 05:16	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/27/12	10/28/12 05:16	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 05:16	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102316

Chesapeake GeoSciences, Inc., Columbia, MD

November 6, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3997 Farm-Flushed</b>	<b>Date/Time Sampled: 10/23/2012 08:40</b>	<b>PSS Sample ID: 12102316-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/23/2012 11:00</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Bromoform	ND	ug/L	5.0		1	10/27/12	10/28/12 05:58	1014
Bromomethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Chlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Chloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Chloroform	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Chloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/27/12	10/28/12 05:58	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Ethylbenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Methyl-t-butyl ether	2.5	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Naphthalene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Styrene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 05:58	1014
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102316

Chesapeake GeoSciences, Inc., Columbia, MD

November 6, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3997 Farm-Flushed</b>	<b>Date/Time Sampled: 10/23/2012 08:40</b>	<b>PSS Sample ID: 12102316-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/23/2012 11:00</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Trichloroethene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
o-Xylene	ND	ug/L	0.50		1	10/27/12	10/28/12 05:58	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/27/12	10/28/12 05:58	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 05:58	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/27/12	10/28/12 05:58	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/27/12	10/28/12 05:58	1014



**CHAIN-OF-CUSTODY RECORD**  
 12102316  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Preservative/Remarks PSS Lab ID  
 1:1 HCl + 4°C  
 1:1 HCl + 4°C  
 1:1 HCl + 4°C  
 Distilled Water from  
 labwater.com was used  
 for TB. Received 10/10/12

# of Coolers: 1  
 Custody Seal: ABS  
 Ice Present: PRES Temp: 2°C  
 Shipping Carrier: UUEENT

Parameters	No. of Containers	Water	Soil	Other
	2	X		
	2	X		
	2	X		

Project Manager: Sean Daniel  
 Project ID: CG-12-0788.03  
 P.O. Number: CG12078803SD  
 Date: 10/23/12 6:50  
 Date: 09:00  
 Date: 06:40

Company Name: Chesapeake GeoSciences, Inc.  
 Project Name: Monrovia BP /Former Green Valley Citigo (FGVC) (2005-0834FR)  
 Sampler(s): Matt Emory Lara Bennett  
 Field Sample ID: T-5  
 3997 Farm - First Draw  
 3997 Farm - Flushed

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>Lara Bennett</i>	10/23/12 11:00	<i>R. Davis</i>	
Lara Bennett		R. DAVIS	

Remarks: MDE-OCP Level I Deliverables/Rates RMS 2008 Rates  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sDaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12102316	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/23/2012 11:00:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/27/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	2
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Lara Bennett</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 10/23/2012

Rachel Davis

PM Review and Approval:

Date: 10/23/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12102609**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 9, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

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**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 9, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12102609**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12102609**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 30, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



# Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102609

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/26/2012 at 11:35 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12102609-001	3998 Rye-First Draw	WATER	10/25/2012 15:00
12102609-002	3998 Rye-Flushed	WATER	10/25/2012 15:35
12102609-003	3998 Rye-Flushed DB	WATER	10/25/2012 15:35
12102609-004	T-9	WATER	10/25/2012 13:45

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12102609

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Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

## Sample Receipt:

All sample receipt conditions were acceptable.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

Chesapeake GeoSciences, Inc., Columbia, MD

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3998 Rye-First Draw**      **Date/Time Sampled: 10/25/2012 15:00**      **PSS Sample ID: 12102609-001**  
**Matrix: WATER**      **Date/Time Received: 10/26/2012 11:35**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Bromoform	ND	ug/L	5.0		1	11/07/12	11/08/12 00:13	1014
Bromomethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Chlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Chloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Chloroform	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Chloromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/07/12	11/08/12 00:13	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Ethylbenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Naphthalene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Styrene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/07/12	11/08/12 00:13	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3998 Rye-First Draw</b>	<b>Date/Time Sampled: 10/25/2012 15:00</b>	<b>PSS Sample ID: 12102609-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/26/2012 11:35</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Trichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
o-Xylene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:13	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/07/12	11/08/12 00:13	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/07/12	11/08/12 00:13	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/07/12	11/08/12 00:13	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/07/12	11/08/12 00:13	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

Chesapeake GeoSciences, Inc., Columbia, MD

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3998 Rye-Flushed**      **Date/Time Sampled: 10/25/2012 15:35**      **PSS Sample ID: 12102609-002**  
**Matrix: WATER**      **Date/Time Received: 10/26/2012 11:35**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Bromoform	ND	ug/L	5.0		1	11/07/12	11/08/12 00:52	1014
Bromomethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Chlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Chloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Chloroform	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Chloromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/07/12	11/08/12 00:52	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Ethylbenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Naphthalene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Styrene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/07/12	11/08/12 00:52	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3998 Rye-Flushed</b>	<b>Date/Time Sampled: 10/25/2012 15:35</b>	<b>PSS Sample ID: 12102609-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/26/2012 11:35</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Trichloroethene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
o-Xylene	ND	ug/L	0.50		1	11/07/12	11/08/12 00:52	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/07/12	11/08/12 00:52	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/07/12	11/08/12 00:52	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/07/12	11/08/12 00:52	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/07/12	11/08/12 00:52	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

Chesapeake GeoSciences, Inc., Columbia, MD

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 3998 Rye-Flushed DB**      **Date/Time Sampled: 10/25/2012 15:35**      **PSS Sample ID: 12102609-003**  
**Matrix: WATER**      **Date/Time Received: 10/26/2012 11:35**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Bromoform	ND	ug/L	5.0		1	11/08/12	11/08/12 14:24	1014
Bromomethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Chlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Chloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Chloroform	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Chloromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/08/12	11/08/12 14:24	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Ethylbenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Naphthalene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Styrene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/08/12	11/08/12 14:24	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 3998 Rye-Flushed DB</b>	<b>Date/Time Sampled: 10/25/2012 15:35</b>	<b>PSS Sample ID: 12102609-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/26/2012 11:35</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Trichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
o-Xylene	ND	ug/L	0.50		1	11/08/12	11/08/12 14:24	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/08/12	11/08/12 14:24	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/08/12	11/08/12 14:24	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/08/12	11/08/12 14:24	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/08/12	11/08/12 14:24	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

Chesapeake GeoSciences, Inc., Columbia, MD

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-9</b>	<b>Date/Time Sampled: 10/25/2012 13:45</b>	<b>PSS Sample ID: 12102609-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/26/2012 11:35</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Bromodichloromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Bromoform	ND	ug/L	5.0		1	11/08/12	11/08/12 15:04	1014
Bromomethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Chlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Chloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Chloroform	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Chloromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	11/08/12	11/08/12 15:04	1014
Dibromochloromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Ethylbenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Isopropylbenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Naphthalene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Styrene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Diisopropyl ether	ND	ug/L	5.0		1	11/08/12	11/08/12 15:04	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Tetrachloroethylene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12102609

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 9, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-9</b>	<b>Date/Time Sampled: 10/25/2012 13:45</b>	<b>PSS Sample ID: 12102609-004</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/26/2012 11:35</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Trichloroethene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
Vinyl Chloride	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
o-Xylene	ND	ug/L	0.50		1	11/08/12	11/08/12 15:04	1014
m,p-Xylenes	ND	ug/L	1.0		1	11/08/12	11/08/12 15:04	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	11/08/12	11/08/12 15:04	1014
tert-Butyl alcohol	ND	ug/L	20		1	11/08/12	11/08/12 15:04	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	11/08/12	11/08/12 15:04	1014



**CHAIN-OF-CUSTODY RECORD**  
 12102609  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Project Manager:  
 Sean Daniel

Project ID:  
 CG-12-0788.03

P.O. Number:  
 CG12078803SD

Company Name:  
 Chesapeake GeoSciences, Inc.

Project Name:  
 Monrovia BP /Former Green Valley  
 Ctigo (FGVC) (2005-0834FR)

Sampler(s):  
 Matt Emery

Field Sample ID	Date	Time	Water	Soil	Other	No. of Containers	VOCs via EPA 524.2	Parameters	Preservative/Remarks	PSS Lab ID
3998 Aye - Flushed	10/25/12	15:35	X			2	X		4% + 1:1 HCl	
3998 Aye - Flushed DB	10/25/12	15:35	X			2	X		4% + 1:1 HCl	
T-9	10/25/12	13:45	X			2	X		Lab Water.com OI water used for T-9.	

Page 13 of 14

Relinquished by: (Signature) 	Date/Time 10/26/12	Received by: (Signature) 	Date/Time 11:35
Relinquished by: (Signature) Lara Bennett	Date/Time 11:35	Received by: (Signature) R. DAVIS	Date/Time
(Printed)	(Printed)	(Printed)	(Printed)

Remarks: MDE-OCP Level I Deliverables/Rates **RMS 2008 Rates**  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA,  
 and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com

Final 1.000. WOH



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12102609	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/26/2012 11:35:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/30/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	2
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 4

Total No. of Containers Received 8

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Samples Inspected/Checklist Completed By:

Date: 10/26/2012

Rachel Davis

PM Review and Approval:

Date: 10/26/2012

Amy Friedlander

# **Analytical Report for**

**Chesapeake GeoSciences, Inc.**

**Certificate of Analysis No.: 12101903**

**Project Manager: Sean Daniel**

**Project Name : Monrovia BP/Former Green Valley Citgo**

**Project ID : CG-12-0788.03**



**November 2, 2012**

**Phase Separation Science, Inc.**

**6630 Baltimore National Pike**

**Baltimore, MD 21228**

**Phone: (410) 747-8770**

**Fax: (410) 788-8723**

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# PHASE SEPARATION SCIENCE, INC.



November 2, 2012

**Sean Daniel**  
**Chesapeake GeoSciences, Inc.**  
5405 Twin Knolls Road, Suite 1  
Columbia, MD 21045

Reference: PSS Work Order No: **12101903**  
Project Name: Monrovia BP/Former Green Valley Citgo  
Project Location: N/A  
Project ID.: CG-12-0788.03

Dear Sean Daniel :

This report includes the analytical results from the analyses performed on the samples received under the project name referenced above and identified with the Phase Separation Science (PSS) Work Order numbered **12101903**.

All work reported herein has been performed in accordance with current NELAP standards, referenced methodologies, PSS Standard Operating Procedures and the PSS Quality Assurance Manual unless otherwise noted in the Case Narrative Summary. PSS is limited in liability to the actual cost of the sample analysis done.

PSS reserves the right to return any unused samples, extracts or related solutions. Otherwise, the samples are scheduled for disposal, without any further notice, on November 23, 2012. This includes any samples that were received with a request to be held but lacked a specific hold period. It is your responsibility to provide a written request defining a specific disposal date if additional storage is required. Upon receipt, the request will be acknowledged by PSS, thus extending the storage period.

This report shall not be reproduced except in full, without the written approval of an authorized PSS representative. A copy of this report will be retained by PSS for at least 5 years, after which time it will be disposed of without further notice, unless prior arrangements have been made.

We thank you for selecting Phase Separation Science, Inc. to serve your analytical needs. If you have any questions concerning this report, do not hesitate to contact us at 410-747-8770 or [info@phaseonline.com](mailto:info@phaseonline.com).

A handwritten signature in black ink that reads 'Dan Prucnal'.

---

**Dan Prucnal**

Laboratory Manager



## Sample Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101903

The following samples were received under chain of custody by Phase Separation Science (PSS) on 10/19/2012 at 10:05 am

Lab Sample Id	Sample Id	Matrix	Date/Time Collected
12101903-001	4016 Middleton-First Draw	WATER	10/18/2012 16:05
12101903-002	4016 Middleton-Flushed	WATER	10/18/2012 16:45
12101903-003	T-3	WATER	10/18/2012 14:45

Please reference the Chain of Custody and Sample Receipt Checklist for specific container counts and preservatives. Any sample conditions not in compliance with sample acceptance criteria are described in Case Narrative Summary.

### Notes:

1. The presence of common laboratory contaminants such as acetone, methylene chloride and phthalates, may be considered a possible laboratory artifact. Where observed, appropriate consideration of data should be taken.
2. The following analytical results are never reported on a dry weight basis: pH, flashpoint, moisture and paint filter test.
3. Drinking water samples collected for the purpose of compliance with SDWA may not be suitable for their intended use unless collected by a certified sampler [COMAR 26.08.05.07.C.2].
4. The analyses of 1,2-dibromo-3-chloropropane (DBCP) and 1,2-dibromoethane (EDB) by EPA 524.2 and calcium, magnesium, sodium and iron by EPA 200.8 are not currently promulgated for use in testing to meet the Safe Drinking Water Act and as such cannot be used for compliance purposes. The listings of the current promulgated methods for testing in compliance with the Safe Drinking Water Act can be found in the 40 CFR part 141.1, for the primary drinking water contaminants, and part 141.3, for the secondary drinking water contaminants.

### Standard Flags/Abbreviations:

- B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- C Results Pending Final Confirmation.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- Fail The result exceeds the regulatory level for Toxicity Characteristic (TCLP) as cited in 40 CFR 261.24 Table 1.
- J The target analyte was positively identified below the reporting limit but greater than the LOD.
- LOD Limit of Detection. An estimate of the minimum amount of a substance that an analytical process can reliably detect. An LOD is analyte and matrix specific.
- ND Not Detected at or above the reporting limit.
- RL PSS Reporting Limit.
- U Not detected.



# Case Narrative Summary

Client Name: Chesapeake GeoSciences, Inc.

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

Work Order Number: 12101903

---

Any holding time exceedances, deviations from the method specifications, regulatory requirements or variations to the procedures outlined in the PSS Quality Assurance Manual are outlined below.

### **Sample Receipt:**

Sample(s) received at a temperature greater than 6 degrees C and ice was present.

**NELAP accreditation was held for all analyses performed unless noted below. See [www.phaseonline.com](http://www.phaseonline.com) for complete PSS scope of accreditation.**

1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101903

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 4016 Middleton-First Draw**      **Date/Time Sampled: 10/18/2012 16:05**      **PSS Sample ID: 12101903-001**  
**Matrix: WATER**      **Date/Time Received: 10/19/2012 10:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Bromoform	ND	ug/L	5.0		1	10/26/12	10/26/12 15:32	1014
Bromomethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Chlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Chloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Chloroform	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Chloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/26/12	10/26/12 15:32	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Ethylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Naphthalene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Styrene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 15:32	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014



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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101903

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 4016 Middleton-First Draw</b>	<b>Date/Time Sampled: 10/18/2012 16:05</b>	<b>PSS Sample ID: 12101903-001</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Trichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
o-Xylene	ND	ug/L	0.50		1	10/26/12	10/26/12 15:32	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/26/12	10/26/12 15:32	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 15:32	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/26/12	10/26/12 15:32	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 15:32	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101903

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: 4016 Middleton-Flushed**      **Date/Time Sampled: 10/18/2012 16:45**      **PSS Sample ID: 12101903-002**  
**Matrix: WATER**      **Date/Time Received: 10/19/2012 10:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Bromoform	ND	ug/L	5.0		1	10/26/12	10/26/12 16:14	1014
Bromomethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Chlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Chloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Chloroform	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Chloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/26/12	10/26/12 16:14	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Ethylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Naphthalene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Styrene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 16:14	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014

OFFICES:  
 6630 BALTIMORE NATIONAL PIKE  
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 BALTIMORE, MD 21228  
 410-747-8770  
 800-932-9047  
 FAX 410-788-8723

# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101903

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: 4016 Middleton-Flushed</b>	<b>Date/Time Sampled: 10/18/2012 16:45</b>	<b>PSS Sample ID: 12101903-002</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Trichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
o-Xylene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:14	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/26/12	10/26/12 16:14	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 16:14	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/26/12	10/26/12 16:14	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 16:14	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101903

Chesapeake GeoSciences, Inc., Columbia, MD

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

**Sample ID: T-3**      **Date/Time Sampled: 10/18/2012 14:45**      **PSS Sample ID: 12101903-003**  
**Matrix: WATER**      **Date/Time Received: 10/19/2012 10:05**

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Benzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Bromodichloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Bromoform	ND	ug/L	5.0		1	10/26/12	10/26/12 16:55	1014
Bromomethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Carbon Tetrachloride	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Chlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Chloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Chloroform	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Chloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,2-Dibromo-3-Chloropropane	ND	ug/L	5.0		1	10/26/12	10/26/12 16:55	1014
Dibromochloromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,2-Dibromoethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,2-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,3-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,4-Dichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Dichlorodifluoromethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,1-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,2-Dichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
cis-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
trans-1,2-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,1-Dichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,2-Dichloropropane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Ethylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Isopropylbenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Methyl-t-butyl ether	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Naphthalene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Styrene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Diisopropyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 16:55	1014
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Tetrachloroethylene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014

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# PHASE SEPARATION SCIENCE, INC.



## CERTIFICATE OF ANALYSIS

No: 12101903

**Chesapeake GeoSciences, Inc., Columbia, MD**

November 2, 2012

Project Name: Monrovia BP/Former Green Valley Citgo

Project ID: CG-12-0788.03

<b>Sample ID: T-3</b>	<b>Date/Time Sampled: 10/18/2012 14:45</b>	<b>PSS Sample ID: 12101903-003</b>
<b>Matrix: WATER</b>	<b>Date/Time Received: 10/19/2012 10:05</b>	

VOC In Drinking Water plus Oxygenates

Analytical Method: EPA 524.2

Preparation Method: 524.2

	Result	Units	RL	Flag	Dil	Prepared	Analyzed	Analyst
Toluene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,2,4-Trichlorobenzene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,1,1-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
1,1,2-Trichloroethane	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Trichloroethene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
Vinyl Chloride	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
o-Xylene	ND	ug/L	0.50		1	10/26/12	10/26/12 16:55	1014
m,p-Xylenes	ND	ug/L	1.0		1	10/26/12	10/26/12 16:55	1014
tert-Butyl ethyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 16:55	1014
tert-Butyl alcohol	ND	ug/L	20		1	10/26/12	10/26/12 16:55	1014
tert-Amyl methyl ether	ND	ug/L	5.0		1	10/26/12	10/26/12 16:55	1014

**Company Name:** Chesapeake GeoSciences, Inc.  
**Project Manager:** Sean Daniel  
**Project Name:** Monrovia BP /Former Green Valley Citgo (FGVC) (2005-0834FR)  
**Project ID:** CG-12-0788.03  
**Sampler(s):** *Lara Bennett*  
**CG10/16/12**  
**P.O. Number:** CG12078803SD

Field Sample ID	Date	Time	No. of Containers			Preservative/Remarks	PSS Lab ID
			Water	Soil	Other		
4016 Middleton - First Draw	10/19/12	16:05	X		2 X	HCl + 4°C	
4016 Middleton - Flushed	10/18/12	16:45	X		2 X	HCl + 4°C	
T-3	10/16/12	14:45	X		2 X	HCl + 4°C	
						Labwater.com Distilled	
						Water used for Trip Blank	
						Received 10/10/12	

**CHAIN-OF-CUSTODY RECORD**  
**12101903**  
 Phase Separation Science, Inc.  
 6630 Baltimore National Pike, Suite 104-A  
 Baltimore, MD 21228  
 (410) 747-8770

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
<i>[Signature]</i>	10/19/12 10:05	<i>[Signature]</i>	
(Printed) Matt Emery		(Printed) R-DAVIS	
Relinquished by: (Signature)	Date/Time	Received by Laboratory: (Signature)	Date/Time
(Printed)		(Printed)	

Remarks: MDE-OCP Level I Deliverables/Rates **RMS 2008 Rates**  
 Please include BTEX, Naphthalene, MTBE, TAME, TBA, ETBE, DIPE, 1,2-DCA, and 1,2-Dibromoethane in EPA 524.2 & 8260 Analyses.  
 E-mail results to sdaniel@cgs.us.com



# Phase Separation Science, Inc

## Sample Receipt Checklist

<b>Work Order #</b>	12101903	<b>Received By</b>	Rachel Davis
<b>Client Name</b>	Chesapeake GeoSciences, Inc.	<b>Date Received</b>	10/19/2012 10:05:00 AM
<b>Project Name</b>	Monrovia BP/Former Green Valley C	<b>Delivered By</b>	Client
<b>Project Number</b>	CG-12-0788.03	<b>Tracking No</b>	Not Applicable
<b>Disposal Date</b>	11/23/2012	<b>Logged In By</b>	Rachel Davis

### Shipping Container(s)

No. of Coolers	1	Ice	Present
Custody Seal(s) Intact?	N/A	Temp (deg C)	15
Seal(s) Signed / Dated?	N/A	Temp Blank Present	No

### Documentation

COC agrees with sample labels?	Yes
Chain of Custody	Yes

Sampler Name	<u>Matt Emery</u>
MD DW Cert. No.	<u>N/A</u>

### Sample Container

Appropriate for Specified Analysis?	Yes
Intact?	Yes
Labeled and Labels Legible?	Yes

Custody Seal(s) Intact?	Not Applicable
Seal(s) Signed / Dated	Not Applicable

Total No. of Samples Received 3

Total No. of Containers Received 6

### Preservation

Metals	(pH<2)	N/A
Cyanides	(pH>12)	N/A
Sulfide	(pH>9)	N/A
TOC, COD, Phenols	(pH<2)	N/A
TOX, TKN, NH3, Total Phos	(pH<2)	N/A
VOC, BTEX (VOA Vials Rcvd Preserved)	(pH<2)	Yes
Do VOA vials have zero headspace?		Yes

### Comments: (Any "No" response must be detailed in the comments section below.)

For any improper preservation conditions, list sample ID, preservative added (reagent ID number) below as well as documentation of any client notification as well as client instructions. Samples for pH, chlorine and dissolved oxygen should be analyzed as soon as possible, preferably in the field at the time of sampling. Samples which require thermal preservation shall be considered acceptable when received at a temperature above freezing to 6°C. Samples that are hand delivered on the day that they are collected may not meet these criteria but shall be considered acceptable if there is evidence that the chilling process has begun such as arrival on ice.

Sample(s) received at a temperature greater than 6 degrees C and ice was present.

Samples Inspected/Checklist Completed By:

Date: 10/19/2012

Rachel Davis

PM Review and Approval:

Date: 10/19/2012

Amy Friedlander