

SOIL GAS SURVEY

FOR

**FULTON GAS WORKS
3301 WILLIAMSBURG AVENUE
RICHMOND, VIRGINIA 23223**

PREPARED FOR:

**CITY OF RICHMOND
DEPARTMENT OF PUBLIC UTILITIES
P.O. BOX 27545
RICHMOND, VIRGINIA 23261**

PREPARED BY:

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Fieldwork Completed: June 2-3, 2016
Report Publication Date: September 16, 2016

SOIL GAS SURVEY

3301 Williamsburg Avenue
Richmond, Virginia 23223

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LIST OF ACRONYMS

ASTM	American Society of Materials and Testing
AWS	Air Water and Soil Laboratories
bgs	below ground surface
DEQ	Virginia Department of Environmental Quality
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
HCl	hydrochloric acid
REC	recognized environmental condition
RSLs	Regional Screening Levels
PVC	polyvinyl chloride
SVOCs	semi-volatile organic compounds
TPH-DRO	total petroleum hydrocarbons – diesel range organics
USGS	United States Geological Survey
VOCs	volatile organic compounds
VRP	Voluntary Remediation Program
VP	vapor point

EXECUTIVE SUMMARY

Timmons Group previously completed an American Society of Testing and Materials (ASTM) Standard E 1903-11 Phase II Environmental Site Assessment (ESA) of property located at 3301 Williamsburg Avenue in the City of Richmond, Virginia (hereafter the "Subject Property", "Site", or "Subject Site"). Completion of the Phase II ESA followed the recommendations of a prior Phase I ESA which recognized the presence of recognized environmental conditions (RECs) on the Subject Property and accordingly recommended further assessment in association with a current proposal for potential renovation and reuse of the property.

According to information from the Phase I ESA, and although minimal evidence was observed as a result of the site reconnaissance, the recorded historic presence of hazardous materials and/or petroleum products on the northern and eastern adjoining properties was concluded to denote a contemporary source for subsurface vapors. Likewise, the history of Fulton in and of itself represents a potential source for the presence of subsurface vapors that under the influence of topographic and/or hydraulic gradients, would have the potential to migrate onto and/or across the Subject Property. Accordingly, the contemporary potential for vapor migration resulting from the historic presence of hazardous materials on the adjoining properties and Fulton represents a REC.

Based on the above, Timmons Group recommended the completion of a Phase II ESA in accordance with ASTM Standard E 1903-11 (Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process) which included the completion of a soil gas survey to evaluate the necessity of proactively mitigating potential vapor risks through the design and implementation of engineering controls.

Soil and groundwater analytical data from the Phase II ESA (completed under separate cover and published January 14, 2016) showed a potential risk to human health and/or the environment, as evidenced by comparing samples with published state and federal regulatory screening levels. Collected soil samples produced measureable concentrations above the EPA Region 3 Screening Level for industrial soil and/or VDEQ Voluntary Remediation Program (VRP) Tier III Screening Concentrations for restricted soil. Groundwater samples likewise produced measureable concentrations above the DEQ VRP Tier III Groundwater Screening Concentrations (Construction Worker in a Trench).

Investigative Methods

Within the boundaries of Fulton only, and excluding the adjoining properties, the soil gas survey involved installing/constructing nineteen (19) soil vapor points across the site using a Geoprobe® direct-push hydraulic sampler and collecting vapor samples for laboratory analysis. The vapor sampling was conducted in accordance with ASTM standards with analysis being completed by an accredited laboratory using approved Environmental Protection Agency (EPA) Methods. Based on the nature of suspected contaminants, the vapor samples were analyzed for VOCs using EPA Method TO-15 (Determination of Volatile Organic Compounds (VOCs) In Air Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)).

Analytical Results

The collected vapor samples produced measureable concentrations above VRP Tier III Residential Subslab Soil Gas Screening Levels for multiple vapor points as detailed below.

- VP#10: Benzene;
- VP#12: Benzene;
- VP#13: 1,2,4-Trimethylbenzene and Total Xylenes;
- VP#14: Benzene, Ethylbenzene, 1,2,4-Trimethylbenzene, m,p-Xylenes, and total Xylenes;

- VP#15: Benzene, Naphthalene, and 1,2,4-Trimethylbenzene;
- VP#16: Benzene, Ethylbenzene, Naphthalene, 1,2,4-Trimethylbenzene, o-Xylenes, m,p-Xylenes, and total Xylenes; and
- VP#19: Benzene.

Conclusions

Based on the proposed redevelopment of the Site, the measured vapor concentrations of VOCs and the associated regulatory exceedances, as reflected by the soil gas sampling results, serve as a basis for recommending remediation. Timmons Group recommends source removal of contaminated soils in areas of notable concentrations, with a cover of at least two feet of clean fill. A recommendation for vapor barrier may also be needed to passively and/or actively mitigate any potential for soil gas infiltration, based on proposed site usage.

1.0 INTRODUCTION

Timmons Group previously completed a Phase I ESA of the Subject Property on August 27, 2015, and a Phase II ESA focusing on adsorbed and dissolved phase concentrations on January 14, 2016, to satisfy due diligence requirements in conjunction with the proposed repurposing of the property. The results of the Phase I ESA identified the following RECs:

- **Hazardous Substances and/or Petroleum Products**

Fulton Gas Works was a manufactured gas plant that burned coal and oil to derive volatiles (natural gas) for use as a residential and industrial fuel source. The plant produced coal gas from approximately 1856 through the 1950's. The passage below in conjunction with site observations presents evidence supporting the high probability of hazardous substance(s) and/or petroleum product(s) concentrations being present onsite.

As detailed by the U.S. EPA regarding manufactured gas plant sites:

Due to the immense amounts of coal which could be handled per year, manufactured gas plant sites often have very large wastewater lagoons and coal tar pits. Common waste products encountered at Superfund assessment and remediation projects include high concentrations of polynuclear aromatic hydrocarbons (PAHs), sulfur compounds, complex cyanide compounds and lower concentrations of volatile and phenolic compounds. These wastes are concentrated in a dense, aromatic coal tar and associated waste waters. This coal tar waste is typically found in large on-site pits, many of which are over 20 feet deep. The metals concentration accumulated in the ash collection system is dependent on the content of the original fuel. The most common metals include aluminum, iron, lead, nickel, and chromium. The ash may be encountered on site mixed with the coal tar or as a separate waste pile. Other inorganic compounds are not typically encountered at significant levels.

Groundwater may be contaminated as a result of leaching or percolation of surface and subsurface contaminants, surface impoundments and leaking process lines and tanks.

Additionally, contaminated buildings and the associated demolition debris may be encountered at abandoned or inactive sites. Associated heat transmission equipment may contain significant amounts of asbestos. Decontamination, asbestos remediation, and wipe testing of this material may be required prior to off-site landfill disposal or scrapping of process equipment.

Based on the above and considering the various evidence alluding to the presence of hazardous materials and/or petroleum concentrations onsite, the historical operations at Fulton Gas Works represent a REC to the Subject Property.

- **Storage Tanks**

Based on the review of historical aerial photographs and Sanborn maps, Fulton Gas Works maintained underground tar cisterns and large, vertical, cylindrical crude oil aboveground storage tanks (ASTs) from as early as 1905 until its closing in the 1950s. The ASTs have since been removed but site observations indicate that the cisterns may still be present; (eg) a partially exposed underground storage tank (UST) is located to the east of the main collection of buildings that is near full of a petroleum-water mixture. Based on the above, the collection of tanks and former bulk storage of petroleum products on the Subject Property represents a REC.

- **Vapor Migration**

The previous/historical storage of petroleum and coal tar on the Subject Property denotes a contemporary source for subsurface vapors that, under the influence of topographic and/or hydraulic

gradients, has the potential to migrate across the Subject Property and onto adjoining properties. Accordingly, the contemporary potential for vapor migration resulting from the historic presence of petroleum and coal tar represents a REC.

- **Polychlorinated Biphenyls (PCBs)**

A cluster of three (3) electrical transformers are mounted on a single utility pole in the central area of the Subject Property. The transformers are not labeled with non-PCB placards and are in fair to poor condition but have been disconnected from usage. Based on their suspected age, condition, and likely construction details, the transformers represent a potential REC to the Subject Property.

Based on the age and nature of the mechanical equipment utilized over the course of facility operation as a coal gas manufacturing plant, the usage of PCB fluids is suspected which represents a potential REC to the Subject Property.

- **Stained Soil/Pavement and/or Stressed Vegetation**

Stained soil and stressed vegetation are present in the southeastern area of the Subject Property which is downgradient from the main buildings of Fulton Gas Works. The staining and stressed vegetation in combination with the detection of odors, as described below, represents a REC.

- **Odors**

The area of stained soils and stressed vegetation located in the southeastern area of the property is noted to generate a strong petroleum-like odor. The odor, in combination with the previously described staining and stressed vegetation, represents a REC.

- **Railroads**

Railroad tracks do not presently transect the Subject Property. However, based on review of historical aerial photographs and Sanborn maps, a feeder line to a series of railroad spurs historically entered the Subject Property from the main line along the northern boundary and circled around to the southern area of the Site. Railroad tracks are historically suspect sources of environmental impact based on the previous burning of coal as a fuel source and the associated particulate fallout which commonly contains elevated concentrations of heavy metals. Accordingly, the potential exists for heavy metal concentrations to be prevalent in the surficial soils onsite. As a result, the former presence of railroad tracks across the Subject Property represents a REC.

As a result of site reconnaissance and reviewing resource materials, the following environmental concerns were observed on the adjoining properties:

- **Hazardous Substances and/or Petroleum Products**

No overt evidence of hazardous substances and/or petroleum products was observed on the adjoining properties during the site inspection; however, as indicated by reviewed resource data, the northern and eastern adjoining properties were previously improved for industrial uses from the late 19th Century through the 1970's which included the above ground bulk storage of petroleum in excess of 2-million gallons. Overall, the historical industrial nature of the northern and eastern adjoining properties represents a potential HREC which translates to a contemporary REC.

Currently, Newton's Bus Service which is located north-adjacent and at a higher elevation maintains two (2) ASTs with individual volumes estimated in excess of 5,000 gallons that are suspected to be used for petroleum storage. A catastrophic release from either of these tanks would have the potential to impact the northern extent of the Subject Property; accordingly, these tanks represent a potential REC.

- **Storage Tanks**

As previously stated, the two (2) bulk petroleum ASTs located on the northern adjoining Newton's Bus Service facility represent a potential REC.

- **Vapor Migration**
Although minimal evidence was observed as a result of the site reconnaissance, the recorded historic presence of hazardous materials and/or petroleum products on the northern and eastern adjoining properties denote a contemporary source for subsurface vapors that, under the influence of topographic and/or hydraulic gradients, have the potential to migrate onto and across the Subject Property. Accordingly, the contemporary potential for vapor migration resulting from the historic presence of hazardous materials on the adjoining properties represents a REC.
- **Railroads**
An active railroad trestle comprised of two (2) sets of tracks currently extends northwest-southeast along the western boundary of the Subject Property. Likewise, a single-track line extends along the northern boundary of the Subject Property that crosses Williamsburg Avenue and a former elevated railroad spur extended along the eastern property boundary. Railroad tracks are historically suspect sources of environmental impact based on the previous burning of coal as a fuel source and the associated particulate fallout which commonly contains elevated concentrations of heavy metals. Accordingly, the potential exists for heavy metal concentrations to be prevalent in the surficial soils onsite. As a result, the potential generation of fugitive dust during the redevelopment of the Subject Property represents a REC.

1.1 Phase II ESA Summary

Based on the previous, Timmons Group recommended the completion of a Phase II ESA to evaluate the subsurface environmental conditions beneath the Subject Property relative to the potential effects imposed by the RECs associated with the Site and surrounding properties. Timmons Group additionally recommended the completion of a soil gas survey to evaluate the necessity of mitigating potential vapor risks to the currently proposed usage through the design and implementation of engineering controls.

A Phase II ESA containing information on soil and groundwater characteristics at the Subject Property was published on January 14, 2016 with the results of that investigation showing exceedances of regulatory screening levels. Collected soil samples produced measureable concentrations above the EPA Region 3 Screening Level for industrial soil and/or DEQ Voluntary Remediation Program (VRP) Tier III Screening Concentrations for restricted soil (industrial). Of the analytes measured, naphthalene was measured at the most notable concentration: approximately 35 times (x) the VRP Tier II concentration and 121x the EPA Region 3 RSL for industrial sites. The collected groundwater samples produced measureable concentrations above the DEQ VRP Tier III Groundwater Screening Concentrations (for Construction Workers in a Trench).

1.2 Purpose and Scope of Services

As a result of the Phase II ESA, the completion of a soil gas survey was proposed with the intent of complementing the soil and groundwater data to further identify whether the former usage of the Subject Property had resulted in associated subsurface impact that could inhibit a current proposal for property redevelopment. Secondarily, the purpose of the soil gas survey included assessing the potential subsurface impact of the Subject Property from offsite sources.

Soil gas samples were collected from nineteen (19) randomly placed vapor points across the Subject Property that were installed using a Geoprobe® direct-push hydraulic sampler. Upon collection, the samples were submitted to Air Water and Soil Laboratories (AWS) in Richmond, Virginia for analysis of VOCs using EPA Method TO-15.

1.3 Limitations

This report was prepared solely for the use of the City of Richmond in accordance with the agreed upon scope of services. Any conclusions provided in this report are based only on the information contained within this document. Additional information with respect to this site or nearby sites, which was not available at the time this assessment was prepared, could modify the conclusions stated herein. This report has been

prepared in general accordance with ASTM standards; no other warranty, expressed or implied, is made as to the professional advice provided under the terms of the agreement between the City of Richmond and Timmons Group.

This soil gas survey was completed in general accordance with all applicable ASTM and industry standards for the collection of samples. However, it should be noted that the collected samples analyzed for this investigation represent isolated data points within and near the boundaries of the Subject Property and should not be considered to represent homogeneous subsurface conditions across the entire property.

The selection of sampling locations was based on a random determination of high probability areas of potential environmental impact as reflected by the locations of suspect source areas, the physical setting of the Subject Property, and results from previous soil and groundwater sampling events.

2.0 SITE AND VICINITY DESCRIPTION

2.1 General Site Description

The Subject Property is comprised of one (1) parcel encompassing approximately 7.9 acres located at 3301 Williamsburg Avenue in the City of Richmond, Virginia in an urban setting (Appendix 1). A coal gasification plant formerly existed on the site; however, a proposal has been formulated for renovation and reuse of the Site by the City of Richmond.

2.2 Site Utilities

According to City of Richmond Department of Public Utilities (DPU) mapping, municipal service mains for various utilities extend beneath or alongside the peripheral roadways from which inactive/disconnected service lines are suspected of extending onto the Subject Property. Ground penetrating radar (GPR) surveys conducted on-site show the existence of utilities on the property, including active public utilities connections along the eastern, northern, and southern portions.

2.3 Physical Setting

2.3.1 Topography

According to the 1994 U.S. Geological Survey (USGS) 7.5 Minute topographic map for the Richmond, Virginia Quadrangle and visual observations, the topography of the Subject Property is relatively flat with a slight gradient to the south and an average elevation of approximately 20 feet above mean sea level (Appendix 1).

2.3.2 Geology

As illustrated by the Geologic Map of Virginia, the Subject Site is located in the Coastal Plain Physiographic Province in close proximity to the Fall Line, which is the boundary separating the Coastal Plain Province from the westward Piedmont Physiographic Province. In general, the Coastal Plain is underlain by a wedge of unconsolidated to semi-consolidated, predominantly clastic sedimentary rocks that consist of mostly sand, silt and clay with lesser amounts of gravel and limestone. Coastal plain formations thicken seaward from a feather edge at their updip limit along the Fall Line, where they overlie older metamorphic, igneous, and consolidated sedimentary rocks of the Piedmont Province, and attain thicknesses ranging from approximately 3,500 to 6,500 feet along the coast (Meisler and Miller, 1988).

According to the Geologic Map of Virginia (1993), the Subject Property is underlain by Lower Tertiary Deposits as described below:

Lower Tertiary Deposits: glauconitic sand and clay-silt, shelly in part, minor sandy limestone and limey sand.

At depth, the Subject Site is further underlain by the Petersburg Granite of the Piedmont Physiographic Province which is generally described as pink to blue faintly foliated coarse grained granite with a high relative hardness.

2.3.3 Hydrology

The 2013 USGS 7.5 Minute topographic map for the Richmond, Virginia Quadrangle was reviewed to extrapolate groundwater characteristics in the area of the Subject Property. As a result, groundwater is determined to flow to the south and west under the influence of the James River which is located approximately 600 feet west of the Subject Property. As the Site is located below the rapids in downtown Richmond, groundwater flow may also be affected by tidal influence on the lower James River. Gillies

Creek, which borders the Subject Property to the south and west, offers no effect to groundwater flow since the stream channel is fully lined with concrete.

3.0 SAMPLING PROCEDURES

Timmons Group was onsite June 2-3, 2016 to advance nineteen (19) Geoprobe® borings into the subsurface across the property. Vapor sampling points were placed for the purpose of collecting soil gas samples in conjunction with completing a soil gas survey. Upon learning that one collected sample was null, Timmons Group returned to the site on June 10, 2016 to collect a repeat sample at vapor point 9.

3.1 Vapor Sampling

The Geoprobe® soil boring locations were selected to evaluate the presence of subsurface vapor impact from potential onsite and/or offsite sources.

Geoprobe® activity was completed in accordance with the following protocol using a two (2) inch diameter by five (5) foot long continuous Macro-Core® sampler:

Prior to advancement into the subsurface, the Macro-Core® sampler was washed in an Alconox® solution and rinsed with clean water after which a new acetate liner was inserted into the sampler. The sampler was then positioned beneath the drive head of the Geoprobe® and advanced into the subsurface to the desired depth. Upon attaining the desired depth, the Macro-Core® sampler was withdrawn from the subsurface to enable the construction of the vapor point.

Each vapor point was constructed in the following manner:

Once the Geoprobe® boring was completed to the desired depth, approximately six (6) inches of sand was initially placed into the bottom of the hole followed by the stainless steel vapor point which was connected to an approximately seven (7) foot long segment of 3/8 inch (outer diameter) Teflon tubing to enable extension above surface grade. The remainder of the hole was then backfilled with sand to approximately one (1) foot from grade with the remainder of the hole backfilled with bentonite chips that were then hydrated to form a seal. At the surface, the extension of the vapor point tubing was encased within a section of PVC pipe that was inserted into the bentonite seal.

Vapor sampling was conducted in accordance with the following protocol:

Once installation was complete, the vapor point was purged with a peristaltic pump in preparation for sample collection. When sampled, the tubing was connected to a one-liter amber bottle that was laboratory prepared to be under a vacuum and thus draw the soil gas sample from the subsurface. When the vacuum on the bottle was exhausted, the sampling apparatus was disconnected and the bottle packed for transportation to the laboratory.

4.0 ANALYTICAL RESULTS

The analytical data generated from the vapor sampling indicate multiple detections of VOCs, including measured concentrations above VRP Tier III Residential Subslab Soil Gas Screening Levels as detailed below.

- VP#10: Benzene;
- VP#12: Benzene;
- VP#13: 1,2,4-Trimethylbenzene and Total Xylenes;
- VP#14: Benzene, Ethylbenzene, 1,2,4-Trimethylbenzene, m,p-Xylenes, and total Xylenes;
- VP#15: Benzene, Naphthalene, and 1,2,4-Trimethylbenzene;
- VP#16: Benzene, Ethylbenzene, Naphthalene, 1,2,4-Trimethylbenzene, o-Xylenes, m,p-Xylenes, and total Xylenes; and
- VP#19: Benzene.

The cumulative analytical summary tables are included as Appendix 2 while the complete laboratory report is included as Appendix 3.

In addition, Timmons Group prepared isoconcentration maps of multiple contaminants (both exceeding regulatory limits and detected on-site) to help identify the movement of compounds through the subsurface of the Subject Property (Appendix 4).

5.0 SUMMARY AND RECOMMENDATIONS

Timmons Group has completed a soil gas survey for the former Fulton Gas Works located on approximately 7.9 acres at 3301 Williamsburg Avenue in the City of Richmond, Virginia. Based on proposed usage and the associated identification of potential risk, the assessment entailed the collection of vapor samples from the Subject Property for laboratory analysis of suspect contaminants.

Based on the proposed redevelopment of the Site, the measured vapor concentrations of VOCs and the associated regulatory exceedances serve as a basis for necessitating remediation. Depending upon the proposed usage, remediation could entail source removal by excavation and replacement with clean fill as feasible. Timmons Group further recommends the use of vapor barriers on any future enclosed slab-on-grade structures to passively mitigate the potential for soil gas infiltration and/or to enhance active vapor mitigation.

The Subject Property is currently enrolled in the DEQ VRP from which additional data associated with the presence and/or migration of subsurface contamination will be assessed through additional site characterization before the appropriate method(s) of remediation is/are identified.

6.0 REFERENCES

ASTM Standard E 1903-11 Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

Commonwealth of Virginia, Department of Mines Minerals and Energy, 1993. Geologic Map of Virginia.

Meisler, H., Miller, J.A., Knobel, L.L., and Waite, R.L., 1988. Region 22, Atlantic and eastern Gulf Coastal Plain, *in* Back, W., Rosenshein, J.S., and Seaber, P.R., eds., Hydrogeology: Boulder, Colorado, Geological Society of America, The Geology of North America, v. O-2.

U.S. Geological Survey, 2013. 7.5 Minute Series Richmond, Virginia Topographic Quadrangle Map, 1:24000 scale.

APPENDICES

Appendix 1 Site Maps

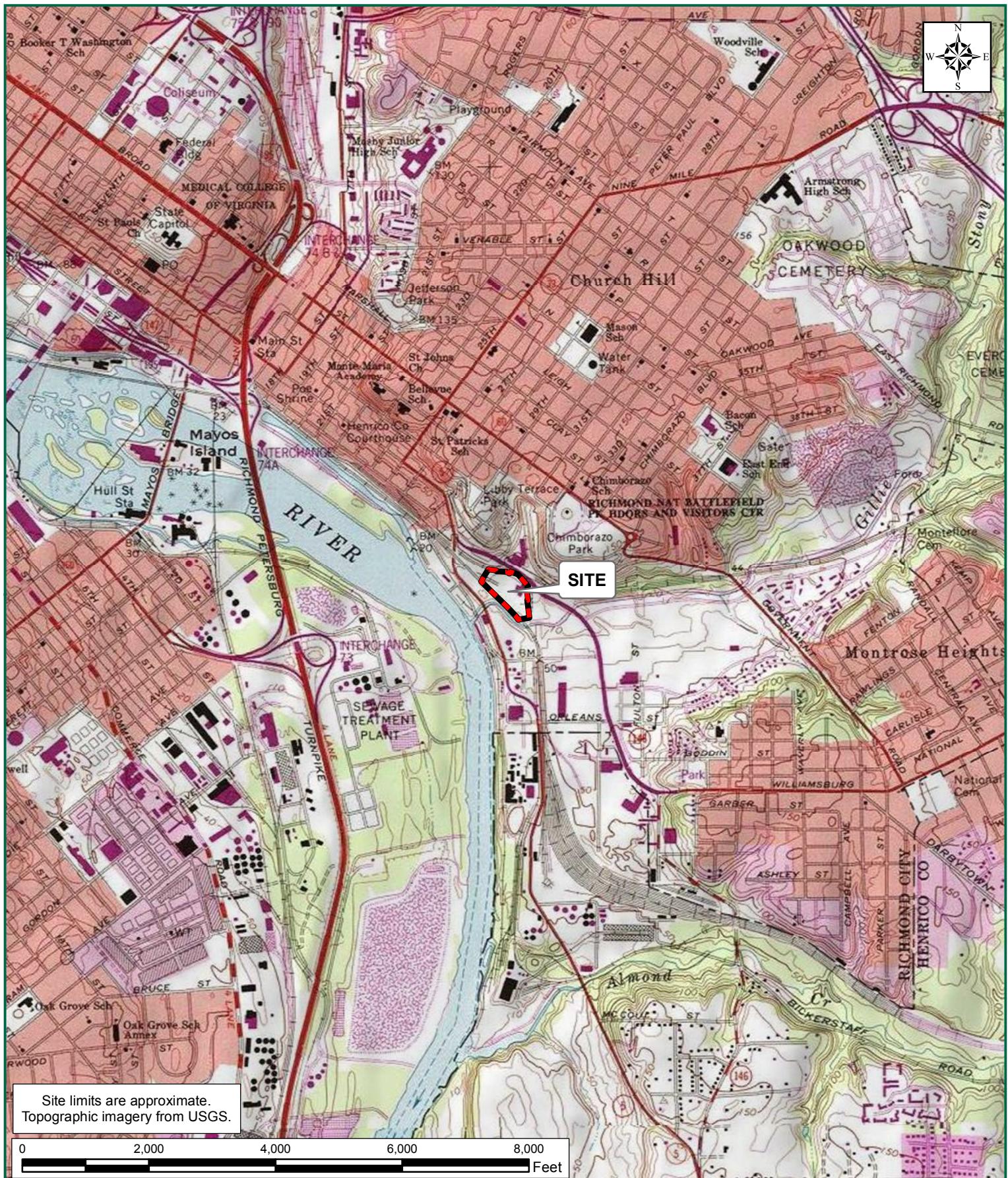
Appendix 2 Cumulative Analytical Summary Tables

Appendix 3 Air Water and Soil Laboratories Reports

Appendix 4 Isoconcentration Maps

APPENDIX 1

Site Maps



FULTON GAS WORKS
CITY OF RICHMOND, VIRGINIA
FIGURE 1: VICINITY MAP

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS. •

TIMMONS GROUP JOB NUMBER: 36156.006

PROJECT STUDY LIMITS: 324 ACRES

LATITUDE: 37° 31' 24.9" N

LONGITUDE: 77° 24' 55.8" W

U.S.G.S. QUADRANGLE(S): RICHMOND

DATE(S): 2013

WATERSHED(S): LOWER JAMES

HYDROLOGIC UNIT CODE(S): 02080206



APPENDIX 2

Cumulative Analytical Summary Tables

Table 1: Soil Vapor Analytical Results for the former Fulton Gas Works

Analyte	VRP Tier III Residential Subslab Soil Gas Screening Level ($\mu\text{g}/\text{m}^3$)	VP#1 ($\mu\text{g}/\text{m}^3$)	VP#2 ($\mu\text{g}/\text{m}^3$)	VP#5 ($\mu\text{g}/\text{m}^3$)	VP#7 ($\mu\text{g}/\text{m}^3$)	VP#10 ($\mu\text{g}/\text{m}^3$)
Benzene	333	330	46	6.9	78	340
1,3-Butadiene						
Carbon Disulfide	2430	190		4.5		74
Chloroform	137	44				
Chloromethane	313	10			38	
Cyclohexane	20,900	27		9.9	110	53
Ethylbenzene	374					
Heptane		22				33
(n-)Hexane	2430	41				84
Isopropylbenzene	1390					
Methyl Ethyl Ketone	17,400	29		4.1		
Naphthalene	10.4					
Propene (Propylene)		970	30	47	380	350
Styrene	3,480					
Toluene	17,400	86				64
1,2,4-Trimethylbenzene	24.3					
1,3,5-Trimethylbenzene						
o-Xylenes	367					
m,p-Xylenes	700	27				
Xylenes, Total	348	27				

NOTES: Samples analyzed using EPA Method TO-15

Highlighted results reflect exceedances of VRP Residential Screening Levels

Blanks represent no detect

(Continued)

Table 1: Soil Vapor Analytical Results for the former Fulton Gas Works

Analyte	VRP Tier III Residential Subslab Soil Gas Screening Level ($\mu\text{g}/\text{m}^3$)	VP#11 ($\mu\text{g}/\text{m}^3$)	VP#12 ($\mu\text{g}/\text{m}^3$)	VP#13 ($\mu\text{g}/\text{m}^3$)	VP#14 ($\mu\text{g}/\text{m}^3$)
Benzene	333		560	180	440
1,3-Butadiene			26		
Carbon Disulfide	2430				
Chloroform	137				
Chloromethane	313				
Cyclohexane	20,900	13			
Ethylbenzene	374				1800
Heptane				590	
(n-)Hexane	2430			920	
Isopropylbenzene	1390				500
Methyl Ethyl Ketone	17,400				
Naphthalene	10.4				
Propene (Propylene)		67	110		
Styrene	3,480			270	
Toluene	17,400		66	300	
1,2,4- Trimethylbenzene	24.3			590	4700
1,3,5- Trimethylbenzene				350	1700
o-Xylenes	367			230	
m,p-Xylenes	700			430	820
Xylenes, Total	348			660	820

NOTES: Samples analyzed using EPA Method TO-15

Highlighted results reflect exceedances of VRP Residential Screening Levels

Blanks represent no detect

(Continued)

Table 1: Soil Vapor Analytical Results for the former Fulton Gas Works

Analyte	VRP Tier III Residential Subslab Soil Gas Screening Level ($\mu\text{g}/\text{m}^3$)	VP#15 ($\mu\text{g}/\text{m}^3$)	VP#16 ($\mu\text{g}/\text{m}^3$)	VP#18 ($\mu\text{g}/\text{m}^3$)	VP#19 ($\mu\text{g}/\text{m}^3$)
Benzene	333	790	2500	46	1500
1,3-Butadiene					
Carbon Disulfide	2430				
Chloroform	137				
Chloromethane	313				
Cyclohexane	20,900				57
Ethylbenzene	374	330	4900		190
Heptane					
(n-)Hexane	2430				
Isopropylbenzene	1390	230	1100		
Methyl Ethyl Ketone	17,400				
Naphthalene	10.4	1800	6300		
Propene (Propylene)		57	110	43	99
Styrene	3,480				
Toluene	17,400	340	5000	44	720
1,2,4-Trimethylbenzene	24.3	2300	7300		
1,3,5-Trimethylbenzene		840	3600		
o-Xylenes	367		5200		67
m,p-Xylenes	700	270	9300		220
Xylenes, Total	348	270	15000		290

NOTES: Samples analyzed using EPA Method TO-15

Highlighted results reflect exceedances of VRP Residential Screening Levels

Blanks represent no detect

APPENDIX 3

Air Water and Soil Laboratories Reports



1941 Reymet Road • Richmond, Virginia 23237 • Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name:	France Environmental, Inc.	Date Received:	June 3, 2016 16:58
	7834 Forest Hill Ave. Suite 7	Date Issued:	June 21, 2016 12:05
	Richmond, VA 23225	Project Number:	36156.006
Submitted To:	Joe France	Purchase Order:	

Client Site I.D.: Fulton Gasworks - Air

Enclosed are the results of analyses for samples received by the laboratory on 06/03/2016 16:58. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized





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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc. Date Received: June 3, 2016 16:58
7834 Forest Hill Ave. Suite 7 Date Issued: June 21, 2016 12:05
Richmond, VA 23225 Project Number: 36156.006

Submitted To: Joe France Purchase Order:

Client Site I.D.: Fulton Gasworks - Air

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VP-1	16F0127-01	Air	06/03/2016 10:25	06/03/2016 16:58
VP-2	16F0127-02	Air	06/03/2016 10:27	06/03/2016 16:58
VP-3	16F0127-03	Air	06/03/2016 10:30	06/03/2016 16:58
VP-4	16F0127-04	Air	06/03/2016 10:32	06/03/2016 16:58
VP-5	16F0127-05	Air	06/03/2016 10:36	06/03/2016 16:58
VP-6	16F0127-06	Air	06/03/2016 10:38	06/03/2016 16:58
VP-7	16F0127-07	Air	06/03/2016 10:41	06/03/2016 16:58
VP-8	16F0127-08	Air	06/03/2016 10:43	06/03/2016 16:58
VP-10	16F0127-10	Air	06/03/2016 10:49	06/03/2016 16:58
VP-11	16F0127-11	Air	06/03/2016 10:51	06/03/2016 16:58
VP-12	16F0127-12	Air	06/03/2016 10:54	06/03/2016 16:58
VP-13	16F0127-13	Air	06/03/2016 10:58	06/03/2016 16:58
VP-14	16F0127-14	Air	06/03/2016 11:01	06/03/2016 16:58
VP-15	16F0127-15	Air	06/03/2016 11:06	06/03/2016 16:58
VP-16	16F0127-16	Air	06/03/2016 11:03	06/03/2016 16:58
VP-17	16F0127-17	Air	06/03/2016 11:09	06/03/2016 16:58
VP-18	16F0127-18	Air	06/03/2016 11:11	06/03/2016 16:58
VP-19	16F0127-19	Air	06/03/2016 11:14	06/03/2016 16:58



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-1 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-01 Canister ID: #16072 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:25 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	1.33	3.33		ND	7.3	18	1	6.67	6/14/16 16:01
1,1,1,2-Tetrachloroethane	ND	1.33	3.33		ND	9.2	23	1	6.67	6/14/16 16:01
1,1,2,2-Tetrachloroethane	ND	1.33	3.33		ND	9.2	23	1	6.67	6/14/16 16:01
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.33	3.33		ND	10	26	1	6.67	6/14/16 16:01
1,1,2-Trichloroethane	ND	1.33	3.33		ND	7.3	18	1	6.67	6/14/16 16:01
1,1-Dichloroethane	ND	1.33	3.33		ND	5.4	13	1	6.67	6/14/16 16:01
1,1-Dichloroethylene	ND	1.33	3.33		ND	5.3	13	1	6.67	6/14/16 16:01
1,2,4-Trimethylbenzene	ND	1.33	3.33		ND	6.6	16	1	6.67	6/14/16 16:01
1,2-Dibromoethane (EDB)	ND	1.33	3.33		ND	10	26	1	6.67	6/14/16 16:01
1,2-Dichlorobenzene	ND	1.33	3.33		ND	8.0	20	1	6.67	6/14/16 16:01
1,2-Dichloroethane	ND	1.33	3.33		ND	5.4	13	1	6.67	6/14/16 16:01
1,2-Dichloropropane	ND	1.33	3.33		ND	6.2	15	1	6.67	6/14/16 16:01
1,2-Dichlortetrafluoroethane	ND	1.33	3.33		ND	9.3	23	1	6.67	6/14/16 16:01
1,3,5-Trimethylbenzene	ND	1.33	3.33		ND	6.6	16	1	6.67	6/14/16 16:01
1,3-Butadiene	ND	1.33	3.33		ND	2.9	7.4	1	6.67	6/14/16 16:01
1,3-Dichlorobenzene	ND	1.33	3.33		ND	8.0	20	1	6.67	6/14/16 16:01
1,4-Dichlorobenzene	ND	1.33	3.33		ND	8.0	20	1	6.67	6/14/16 16:01
1,4-Dioxane	ND	1.33	3.33		ND	4.8	12	1	6.67	6/14/16 16:01
2-Butanone (MEK)	9.87	1.33	3.33		29	3.9	9.8	1	6.67	6/14/16 16:01
4-Methyl-2-pentanone (MIBK)	ND	1.33	3.33		ND	15	38	1	6.67	6/14/16 16:01
Acrolein	ND	1.33	3.33		ND	3.1	7.6	1	6.67	6/14/16 16:01
Allyl chloride	ND	1.33	3.33		ND	4.2	10	1	6.67	6/14/16 16:01
Benzene	103	1.33	3.33		330	4.3	11	1	6.67	6/14/16 16:01
Benzyl Chloride	ND	1.33	3.33		ND	6.9	17	1	6.67	6/14/16 16:01
Bromodichloromethane	ND	1.33	3.33		ND	8.9	22	1	6.67	6/14/16 16:01
Bromoform	ND	1.33	3.33		ND	14	34	1	6.67	6/14/16 16:01
Bromomethane	ND	1.33	3.33		ND	5.2	13	1	6.67	6/14/16 16:01
Carbon Disulfide	59.6	3.33	3.33		190	10	10	1	6.67	6/14/16 16:01
Carbon Tetrachloride	ND	1.33	3.33		ND	8.4	21	1	6.67	6/14/16 16:01
Chlorobenzene	ND	1.33	3.33		ND	6.1	15	1	6.67	6/14/16 16:01
Chloroethane	ND	1.33	3.33		ND	3.5	8.8	1	6.67	6/14/16 16:01
Chloroform	9.00	1.33	3.33		44	6.5	16	1	6.67	6/14/16 16:01
Chloromethane	4.93	1.33	3.33		10	2.8	6.9	1	6.67	6/14/16 16:01
cis-1,2-Dichloroethylene	ND	1.33	3.33		ND	5.3	13	1	6.67	6/14/16 16:01



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-1 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-01 Canister ID: #16072 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:25 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	1.33	3.33		ND	6.1	15	1	6.67	6/14/16 16:01
Cyclohexane	7.80	1.33	3.33		27	4.6	11	1	6.67	6/14/16 16:01
Dichlorodifluoromethane	ND	3.33	3.33		ND	16	16	1	6.67	6/14/16 16:01
Ethyl acetate	ND	1.33	3.33		ND	4.8	12	1	6.67	6/14/16 16:01
Ethylbenzene	ND	1.33	3.33		ND	5.8	14	1	6.67	6/14/16 16:01
Heptane	5.33	1.33	3.33		22	5.5	14	1	6.67	6/14/16 16:01
Hexane	11.7	1.33	3.33		41	4.7	12	1	6.67	6/14/16 16:01
Isopropylbenzene	ND	1.33	3.33		ND	6.6	16	1	6.67	6/14/16 16:01
m+p-Xylenes	6.27	2.67	6.67	J	27	12	29	1	6.67	6/14/16 16:01
Methyl methacrylate	ND	1.33	3.33		ND	5.5	14	1	6.67	6/14/16 16:01
Methylene chloride	ND	3.33	6.67		ND	12	23	1	6.67	6/14/16 16:01
Methyl-t-butyl ether (MTBE)	ND	1.33	3.33		ND	4.8	12	1	6.67	6/14/16 16:01
o-Xylene	ND	1.33	3.33		ND	5.8	14	1	6.67	6/14/16 16:01
Propylene	562	25.0	62.5		970	43	110	1	125	6/16/16 16:30
Styrene	ND	1.33	3.33		ND	5.7	14	1	6.67	6/14/16 16:01
TBA	ND	3.33	3.33		ND	10	10	1	6.67	6/14/16 16:01
Tetrachloroethylene (PCE)	ND	1.33	3.33		ND	9.0	23	1	6.67	6/14/16 16:01
Tetrahydrofuran	ND	1.33	3.33		ND	3.9	9.8	1	6.67	6/14/16 16:01
Toluene	22.9	1.33	3.33		86	5.0	13	1	6.67	6/14/16 16:01
trans-1,2-Dichloroethylene	ND	1.33	3.33		ND	5.3	13	1	6.67	6/14/16 16:01
trans-1,3-Dichloropropene	ND	1.33	3.33		ND	6.1	15	1	6.67	6/14/16 16:01
Trichloroethylene	ND	1.33	3.33		ND	7.2	18	1	6.67	6/14/16 16:01
Trichlorofluoromethane	ND	3.33	3.33		ND	19	19	1	6.67	6/14/16 16:01
Vinyl acetate	ND	1.33	3.33		ND	4.7	12	1	6.67	6/14/16 16:01
Vinyl bromide	ND	1.33	3.33		ND	5.8	15	1	6.67	6/14/16 16:01
Vinyl chloride	ND	1.33	3.33		ND	3.4	8.5	1	6.67	6/14/16 16:01
Xylenes, Total	6.27	4.00	10.0	J	27	17	43	1	6.67	6/14/16 16:01
Surrogate(s)	% Recovery			% Recovery Limits						
4-Bromofluorobenzene		107			80-120				6/16/16 16:30	
4-Bromofluorobenzene		97.2			80-120				6/14/16 16:01	



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-2 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-02 Canister ID: #16073 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:27 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/18/16 14:50 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/18/16 14:50 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/18/16 14:50 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/18/16 14:50 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/18/16 14:50 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/18/16 14:50 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/18/16 14:50 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/18/16 14:50 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/18/16 14:50 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/18/16 14:50 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/18/16 14:50 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/18/16 14:50 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/18/16 14:50 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/18/16 14:50 RJJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/18/16 14:50 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/18/16 14:50 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/18/16 14:50 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/18/16 14:50 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/18/16 14:50 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/18/16 14:50 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/18/16 14:50 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/18/16 14:50 RJJW
Benzene	14.5	5.00	12.5		46	16	40	1	25	6/18/16 14:50 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/18/16 14:50 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/18/16 14:50 RJJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/18/16 14:50 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/18/16 14:50 RJJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/18/16 14:50 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/18/16 14:50 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/18/16 14:50 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/18/16 14:50 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/18/16 14:50 RJJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/18/16 14:50 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/18/16 14:50 RJJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-2 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-02 Canister ID: #16073 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:27 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15								Date/Time Analyzed	Analyst
	Results	ppbv	MDL	LOQ	Flag/Qual	ug/M³	MDL	LOQ		
cis-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25
Cyclohexane	ND	5.00	12.5			ND	17	43	1	25
Dichlorodifluoromethane	ND	12.5	12.5			ND	62	62	1	25
Ethyl acetate	ND	5.00	12.5			ND	18	45	1	25
Ethylbenzene	ND	5.00	12.5			ND	22	54	1	25
Heptane	ND	5.00	12.5			ND	20	51	1	25
Hexane	ND	5.00	12.5			ND	18	44	1	25
Isopropylbenzene	ND	5.00	12.5			ND	25	61	1	25
m+p-Xylenes	ND	10.0	25.0			ND	43	110	1	25
Methyl methacrylate	ND	5.00	12.5			ND	20	51	1	25
Methylene chloride	ND	12.5	25.0			ND	43	87	1	25
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5			ND	18	45	1	25
o-Xylene	ND	5.00	12.5			ND	22	54	1	25
Propylene	17.5	5.00	12.5			30	8.6	22	1	25
Styrene	ND	5.00	12.5			ND	21	53	1	25
TBA	ND	12.5	12.5			ND	38	38	1	25
Tetrachloroethylene (PCE)	ND	5.00	12.5			ND	34	85	1	25
Tetrahydrofuran	ND	5.00	12.5			ND	15	37	1	25
Toluene	ND	5.00	12.5			ND	19	47	1	25
trans-1,2-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25
trans-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25
Trichloroethylene	ND	5.00	12.5			ND	27	67	1	25
Trichlorofluoromethane	ND	12.5	12.5			ND	70	70	1	25
Vinyl acetate	ND	5.00	12.5			ND	18	44	1	25
Vinyl bromide	ND	5.00	12.5			ND	22	55	1	25
Vinyl chloride	ND	5.00	12.5			ND	13	32	1	25
Xylenes, Total	ND	15.0	37.5			ND	65	160	1	25

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	83.0	80-120	6/18/16 14:50



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Final Report

Laboratory Order ID 16F0127

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-3 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-03 Canister ID: #16074 Receipt Vacuum(in Hg): 0
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:30 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/15/16 15:50 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/15/16 15:50 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/15/16 15:50 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/15/16 15:50 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/15/16 15:50 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/15/16 15:50 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/15/16 15:50 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/15/16 15:50 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/15/16 15:50 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 15:50 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/15/16 15:50 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/15/16 15:50 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/15/16 15:50 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/15/16 15:50 RJJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/15/16 15:50 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 15:50 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 15:50 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/15/16 15:50 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/15/16 15:50 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/15/16 15:50 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/15/16 15:50 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/15/16 15:50 RJJW
Benzene	ND	5.00	12.5		ND	16	40	1	25	6/15/16 15:50 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/15/16 15:50 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/15/16 15:50 RJJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/15/16 15:50 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/15/16 15:50 RJJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/15/16 15:50 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/15/16 15:50 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/15/16 15:50 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/15/16 15:50 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/15/16 15:50 RJJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/15/16 15:50 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/15/16 15:50 RJJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 3, 2016 16:58
		Date Issued:	June 21, 2016 12:05
Submitted To:	Joe France	Project Number:	36156.006
Client Site I.D.:	Fulton Gasworks - Air	Purchase Order:	

ANALYTICAL RESULTS

Project Location:	Sample Description/Location:	Initial Vacuum(in Hg): 30
Field Sample #: VP-3	Sub Description/Location:	Final Vacuum(in Hg):
Sample ID: 16F0127-03	Canister ID: #16074	Receipt Vacuum(in Hg): 0
Sample Matrix: Air	Canister Size: 1.4 L	Flow Controller Type:
Sampled: 6/3/2016 10:30		Flow Controller ID:
Sample Type:		

Analyte	EPA TO-15								Date/Time Analyzed	Analyst		
	Results	ppbv	MDL	LOQ	Flag/Qual	ug/M³	MDL	LOQ	Dilution	PF		
cis-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25	6/15/16 15:50	RJW
Cyclohexane	ND	5.00	12.5			ND	17	43	1	25	6/15/16 15:50	RJW
Dichlorodifluoromethane	ND	12.5	12.5			ND	62	62	1	25	6/15/16 15:50	RJW
Ethyl acetate	ND	5.00	12.5			ND	18	45	1	25	6/15/16 15:50	RJW
Ethylbenzene	ND	5.00	12.5			ND	22	54	1	25	6/15/16 15:50	RJW
Heptane	ND	5.00	12.5			ND	20	51	1	25	6/15/16 15:50	RJW
Hexane	ND	5.00	12.5			ND	18	44	1	25	6/15/16 15:50	RJW
Isopropylbenzene	ND	5.00	12.5			ND	25	61	1	25	6/15/16 15:50	RJW
m+p-Xylenes	ND	10.0	25.0			ND	43	110	1	25	6/15/16 15:50	RJW
Methyl methacrylate	ND	5.00	12.5			ND	20	51	1	25	6/15/16 15:50	RJW
Methylene chloride	ND	12.5	25.0			ND	43	87	1	25	6/15/16 15:50	RJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5			ND	18	45	1	25	6/15/16 15:50	RJW
o-Xylene	ND	5.00	12.5			ND	22	54	1	25	6/15/16 15:50	RJW
Propylene	ND	5.00	12.5			ND	8.6	22	1	25	6/15/16 15:50	RJW
Styrene	ND	5.00	12.5			ND	21	53	1	25	6/15/16 15:50	RJW
TBA	ND	12.5	12.5			ND	38	38	1	25	6/15/16 15:50	RJW
Tetrachloroethylene (PCE)	ND	5.00	12.5			ND	34	85	1	25	6/15/16 15:50	RJW
Tetrahydrofuran	ND	5.00	12.5			ND	15	37	1	25	6/15/16 15:50	RJW
Toluene	ND	5.00	12.5			ND	19	47	1	25	6/15/16 15:50	RJW
trans-1,2-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25	6/15/16 15:50	RJW
trans-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25	6/15/16 15:50	RJW
Trichloroethylene	ND	5.00	12.5			ND	27	67	1	25	6/15/16 15:50	RJW
Trichlorofluoromethane	ND	12.5	12.5			ND	70	70	1	25	6/15/16 15:50	RJW
Vinyl acetate	ND	5.00	12.5			ND	18	44	1	25	6/15/16 15:50	RJW
Vinyl bromide	ND	5.00	12.5			ND	22	55	1	25	6/15/16 15:50	RJW
Vinyl chloride	ND	5.00	12.5			ND	13	32	1	25	6/15/16 15:50	RJW
Xylenes, Total	ND	15.0	37.5			ND	65	160	1	25	6/15/16 15:50	RJW
Surrogate(s)						% Recovery					% Recovery Limits	
4-Bromofluorobenzene						81.2					80-120	
												6/15/16 15:50



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-4 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-04 Canister ID: #16174 Receipt Vacuum(in Hg): 3
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:32 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	0.25	0.62		ND	1.4	3.4	1	1.25	6/14/16 17:31
1,1,1,2-Tetrachloroethane	ND	0.25	0.62		ND	1.7	4.3	1	1.25	6/14/16 17:31
1,1,2,2-Tetrachloroethane	ND	0.25	0.62		ND	1.7	4.3	1	1.25	6/14/16 17:31
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.25	0.62		ND	1.9	4.8	1	1.25	6/14/16 17:31
1,1,2-Trichloroethane	ND	0.25	0.62		ND	1.4	3.4	1	1.25	6/14/16 17:31
1,1-Dichloroethane	ND	0.25	0.62		ND	1.0	2.5	1	1.25	6/14/16 17:31
1,1-Dichloroethylene	ND	0.25	0.62		ND	0.99	2.5	1	1.25	6/14/16 17:31
1,2,4-Trimethylbenzene	ND	0.25	0.62		ND	1.2	3.1	1	1.25	6/14/16 17:31
1,2-Dibromoethane (EDB)	ND	0.25	0.62		ND	1.9	4.8	1	1.25	6/14/16 17:31
1,2-Dichlorobenzene	ND	0.25	0.62		ND	1.5	3.8	1	1.25	6/14/16 17:31
1,2-Dichloroethane	ND	0.25	0.62		ND	1.0	2.5	1	1.25	6/14/16 17:31
1,2-Dichloropropane	ND	0.25	0.62		ND	1.2	2.9	1	1.25	6/14/16 17:31
1,2-Dichlortetrafluoroethane	ND	0.25	0.62		ND	1.7	4.4	1	1.25	6/14/16 17:31
1,3,5-Trimethylbenzene	ND	0.25	0.62		ND	1.2	3.1	1	1.25	6/14/16 17:31
1,3-Butadiene	ND	0.25	0.62		ND	0.55	1.4	1	1.25	6/14/16 17:31
1,3-Dichlorobenzene	ND	0.25	0.62		ND	1.5	3.8	1	1.25	6/14/16 17:31
1,4-Dichlorobenzene	ND	0.25	0.62		ND	1.5	3.8	1	1.25	6/14/16 17:31
1,4-Dioxane	ND	0.25	0.62		ND	0.90	2.3	1	1.25	6/14/16 17:31
2-Butanone (MEK)	ND	0.25	0.62		ND	0.74	1.8	1	1.25	6/14/16 17:31
4-Methyl-2-pentanone (MIBK)	ND	0.25	0.62		ND	2.9	7.2	1	1.25	6/14/16 17:31
Acrolein	ND	0.25	0.62		ND	0.57	1.4	1	1.25	6/14/16 17:31
Allyl chloride	ND	0.25	0.62		ND	0.78	2.0	1	1.25	6/14/16 17:31
Benzene	ND	0.25	0.62		ND	0.80	2.0	1	1.25	6/14/16 17:31
Benzyl Chloride	ND	0.25	0.62		ND	1.3	3.2	1	1.25	6/14/16 17:31
Bromodichloromethane	ND	0.25	0.62		ND	1.7	4.2	1	1.25	6/14/16 17:31
Bromoform	ND	0.25	0.62		ND	2.6	6.5	1	1.25	6/14/16 17:31
Bromomethane	ND	0.25	0.62		ND	0.97	2.4	1	1.25	6/14/16 17:31
Carbon Disulfide	ND	0.62	0.62		ND	1.9	1.9	1	1.25	6/14/16 17:31
Carbon Tetrachloride	ND	0.25	0.62		ND	1.6	3.9	1	1.25	6/14/16 17:31
Chlorobenzene	ND	0.25	0.62		ND	1.2	2.9	1	1.25	6/14/16 17:31
Chloroethane	ND	0.25	0.62		ND	0.66	1.6	1	1.25	6/14/16 17:31
Chloroform	ND	0.25	0.62		ND	1.2	3.1	1	1.25	6/14/16 17:31
Chloromethane	ND	0.25	0.62		ND	0.52	1.3	1	1.25	6/14/16 17:31
cis-1,2-Dichloroethylene	ND	0.25	0.62		ND	0.99	2.5	1	1.25	6/14/16 17:31



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-4 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-04 Canister ID: #16174 Receipt Vacuum(in Hg): 3
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:32 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	0.25	0.62		ND	1.1	2.8	1	1.25	6/14/16 17:31
Cyclohexane	ND	0.25	0.62		ND	0.86	2.2	1	1.25	6/14/16 17:31
Dichlorodifluoromethane	ND	0.62	0.62		ND	3.1	3.1	1	1.25	6/14/16 17:31
Ethyl acetate	ND	0.25	0.62		ND	0.90	2.3	1	1.25	6/14/16 17:31
Ethylbenzene	ND	0.25	0.62		ND	1.1	2.7	1	1.25	6/14/16 17:31
Heptane	ND	0.25	0.62		ND	1.0	2.6	1	1.25	6/14/16 17:31
Hexane	ND	0.25	0.62		ND	0.88	2.2	1	1.25	6/14/16 17:31
Isopropylbenzene	ND	0.25	0.62		ND	1.2	3.1	1	1.25	6/14/16 17:31
m+p-Xylenes	ND	0.50	1.25		ND	2.2	5.4	1	1.25	6/14/16 17:31
Methyl methacrylate	ND	0.25	0.62		ND	1.0	2.6	1	1.25	6/14/16 17:31
Methylene chloride	ND	0.62	1.25		ND	2.2	4.3	1	1.25	6/14/16 17:31
Methyl-t-butyl ether (MTBE)	ND	0.25	0.62		ND	0.90	2.3	1	1.25	6/14/16 17:31
o-Xylene	ND	0.25	0.62		ND	1.1	2.7	1	1.25	6/14/16 17:31
Propylene	ND	0.25	0.62		ND	0.43	1.1	1	1.25	6/14/16 17:31
Styrene	ND	0.25	0.62		ND	1.1	2.7	1	1.25	6/14/16 17:31
TBA	ND	0.62	0.62		ND	1.9	1.9	1	1.25	6/14/16 17:31
Tetrachloroethylene (PCE)	ND	0.25	0.62		ND	1.7	4.2	1	1.25	6/14/16 17:31
Tetrahydrofuran	ND	0.25	0.62		ND	0.74	1.8	1	1.25	6/14/16 17:31
Toluene	ND	0.25	0.62		ND	0.94	2.4	1	1.25	6/14/16 17:31
trans-1,2-Dichloroethylene	ND	0.25	0.62		ND	0.99	2.5	1	1.25	6/14/16 17:31
trans-1,3-Dichloropropene	ND	0.25	0.62		ND	1.1	2.8	1	1.25	6/14/16 17:31
Trichloroethylene	ND	0.25	0.62		ND	1.3	3.4	1	1.25	6/14/16 17:31
Trichlorofluoromethane	ND	0.62	0.62		ND	3.5	3.5	1	1.25	6/14/16 17:31
Vinyl acetate	ND	0.25	0.62		ND	0.88	2.2	1	1.25	6/14/16 17:31
Vinyl bromide	ND	0.25	0.62		ND	1.1	2.7	1	1.25	6/14/16 17:31
Vinyl chloride	ND	0.25	0.62		ND	0.64	1.6	1	1.25	6/14/16 17:31
Xylenes, Total	ND	0.75	1.88		ND	3.3	8.1	1	1.25	6/14/16 17:31

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	97.8	80-120	6/14/16 17:31



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-5 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-05 Canister ID: #16076 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:36 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
1,1,1-Trichloroethane	ND	0.50	1.25		ND	2.7	6.8	1	2.5	6/14/16 16:43
1,1,1,2-Tetrachloroethane	ND	0.50	1.25		ND	3.4	8.6	1	2.5	6/14/16 16:43
1,1,2,2-Tetrachloroethane	ND	0.50	1.25		ND	3.4	8.6	1	2.5	6/14/16 16:43
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50	1.25		ND	3.8	9.6	1	2.5	6/14/16 16:43
1,1,2-Trichloroethane	ND	0.50	1.25		ND	2.7	6.8	1	2.5	6/14/16 16:43
1,1-Dichloroethane	ND	0.50	1.25		ND	2.0	5.1	1	2.5	6/14/16 16:43
1,1-Dichloroethylene	ND	0.50	1.25		ND	2.0	5.0	1	2.5	6/14/16 16:43
1,2,4-Trimethylbenzene	ND	0.50	1.25		ND	2.5	6.1	1	2.5	6/14/16 16:43
1,2-Dibromoethane (EDB)	ND	0.50	1.25		ND	3.8	9.6	1	2.5	6/14/16 16:43
1,2-Dichlorobenzene	ND	0.50	1.25		ND	3.0	7.5	1	2.5	6/14/16 16:43
1,2-Dichloroethane	ND	0.50	1.25		ND	2.0	5.1	1	2.5	6/14/16 16:43
1,2-Dichloropropane	ND	0.50	1.25		ND	2.3	5.8	1	2.5	6/14/16 16:43
1,2-Dichlortetrafluoroethane	ND	0.50	1.25		ND	3.5	8.7	1	2.5	6/14/16 16:43
1,3,5-Trimethylbenzene	ND	0.50	1.25		ND	2.5	6.1	1	2.5	6/14/16 16:43
1,3-Butadiene	ND	0.50	1.25		ND	1.1	2.8	1	2.5	6/14/16 16:43
1,3-Dichlorobenzene	ND	0.50	1.25		ND	3.0	7.5	1	2.5	6/14/16 16:43
1,4-Dichlorobenzene	ND	0.50	1.25		ND	3.0	7.5	1	2.5	6/14/16 16:43
1,4-Dioxane	ND	0.50	1.25		ND	1.8	4.5	1	2.5	6/14/16 16:43
2-Butanone (MEK)	1.40	0.50	1.25		4.1	1.5	3.7	1	2.5	6/14/16 16:43
4-Methyl-2-pentanone (MIBK)	ND	0.50	1.25		ND	5.7	14	1	2.5	6/14/16 16:43
Acrolein	ND	0.50	1.25		ND	1.1	2.9	1	2.5	6/14/16 16:43
Allyl chloride	ND	0.50	1.25		ND	1.6	3.9	1	2.5	6/14/16 16:43
Benzene	2.15	0.50	1.25		6.9	1.6	4.0	1	2.5	6/14/16 16:43
Benzyl Chloride	ND	0.50	1.25		ND	2.6	6.5	1	2.5	6/14/16 16:43
Bromodichloromethane	ND	0.50	1.25		ND	3.4	8.4	1	2.5	6/14/16 16:43
Bromoform	ND	0.50	1.25		ND	5.2	13	1	2.5	6/14/16 16:43
Bromomethane	ND	0.50	1.25		ND	1.9	4.9	1	2.5	6/14/16 16:43
Carbon Disulfide	1.45	1.25	1.25		4.5	3.9	3.9	1	2.5	6/14/16 16:43
Carbon Tetrachloride	ND	0.50	1.25		ND	3.1	7.9	1	2.5	6/14/16 16:43
Chlorobenzene	ND	0.50	1.25		ND	2.3	5.8	1	2.5	6/14/16 16:43
Chloroethane	ND	0.50	1.25		ND	1.3	3.3	1	2.5	6/14/16 16:43
Chloroform	ND	0.50	1.25		ND	2.4	6.1	1	2.5	6/14/16 16:43
Chloromethane	ND	0.50	1.25		ND	1.0	2.6	1	2.5	6/14/16 16:43
cis-1,2-Dichloroethylene	ND	0.50	1.25		ND	2.0	5.0	1	2.5	6/14/16 16:43



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Submitted To: Joe France Date Issued: June 21, 2016 12:05
Client Site I.D.: Fulton Gasworks - Air Project Number: 36156.006
Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-5 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-05 Canister ID: #16076 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:36 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
cis-1,3-Dichloropropene	ND	0.50	1.25		ND	2.3	5.7	1	2.5	6/14/16 16:43
Cyclohexane	2.88	0.50	1.25		9.9	1.7	4.3	1	2.5	6/14/16 16:43
Dichlorodifluoromethane	ND	1.25	1.25		ND	6.2	6.2	1	2.5	6/14/16 16:43
Ethyl acetate	ND	0.50	1.25		ND	1.8	4.5	1	2.5	6/14/16 16:43
Ethylbenzene	ND	0.50	1.25		ND	2.2	5.4	1	2.5	6/14/16 16:43
Heptane	ND	0.50	1.25		ND	2.0	5.1	1	2.5	6/14/16 16:43
Hexane	ND	0.50	1.25		ND	1.8	4.4	1	2.5	6/14/16 16:43
Isopropylbenzene	ND	0.50	1.25		ND	2.5	6.1	1	2.5	6/14/16 16:43
m+p-Xylenes	ND	1.00	2.50		ND	4.3	11	1	2.5	6/14/16 16:43
Methyl methacrylate	ND	0.50	1.25		ND	2.0	5.1	1	2.5	6/14/16 16:43
Methylene chloride	ND	1.25	2.50		ND	4.3	8.7	1	2.5	6/14/16 16:43
Methyl-t-butyl ether (MTBE)	ND	0.50	1.25		ND	1.8	4.5	1	2.5	6/14/16 16:43
o-Xylene	ND	0.50	1.25		ND	2.2	5.4	1	2.5	6/14/16 16:43
Propylene	27.6	0.50	1.25	47	0.86	2.2		1	2.5	6/14/16 16:43
Styrene	ND	0.50	1.25		ND	2.1	5.3	1	2.5	6/14/16 16:43
TBA	ND	1.25	1.25		ND	3.8	3.8	1	2.5	6/14/16 16:43
Tetrachloroethylene (PCE)	ND	0.50	1.25		ND	3.4	8.5	1	2.5	6/14/16 16:43
Tetrahydrofuran	ND	0.50	1.25		ND	1.5	3.7	1	2.5	6/14/16 16:43
Toluene	ND	0.50	1.25		ND	1.9	4.7	1	2.5	6/14/16 16:43
trans-1,2-Dichloroethylene	ND	0.50	1.25		ND	2.0	5.0	1	2.5	6/14/16 16:43
trans-1,3-Dichloropropene	ND	0.50	1.25		ND	2.3	5.7	1	2.5	6/14/16 16:43
Trichloroethylene	ND	0.50	1.25		ND	2.7	6.7	1	2.5	6/14/16 16:43
Trichlorofluoromethane	ND	1.25	1.25		ND	7.0	7.0	1	2.5	6/14/16 16:43
Vinyl acetate	ND	0.50	1.25		ND	1.8	4.4	1	2.5	6/14/16 16:43
Vinyl bromide	ND	0.50	1.25		ND	2.2	5.5	1	2.5	6/14/16 16:43
Vinyl chloride	ND	0.50	1.25		ND	1.3	3.2	1	2.5	6/14/16 16:43
Xylenes, Total	ND	1.50	3.75		ND	6.5	16	1	2.5	6/14/16 16:43
Surrogate(s)				% Recovery					% Recovery Limits	
4-Bromofluorobenzene				96.6					80-120	
										6/14/16 16:43



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-6 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-06 Canister ID: #16077 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:38 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/15/16 17:14 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/15/16 17:14 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/15/16 17:14 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/15/16 17:14 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/15/16 17:14 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/15/16 17:14 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/15/16 17:14 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/15/16 17:14 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/15/16 17:14 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 17:14 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/15/16 17:14 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/15/16 17:14 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/15/16 17:14 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/15/16 17:14 RJJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/15/16 17:14 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 17:14 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 17:14 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/15/16 17:14 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/15/16 17:14 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/15/16 17:14 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/15/16 17:14 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/15/16 17:14 RJJW
Benzene	ND	5.00	12.5		ND	16	40	1	25	6/15/16 17:14 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/15/16 17:14 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/15/16 17:14 RJJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/15/16 17:14 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/15/16 17:14 RJJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/15/16 17:14 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/15/16 17:14 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/15/16 17:14 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/15/16 17:14 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/15/16 17:14 RJJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/15/16 17:14 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/15/16 17:14 RJJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Submitted To: Joe France Date Issued: June 21, 2016 12:05
Client Site I.D.: Fulton Gasworks - Air Project Number: 36156.006
Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-6 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-06 Canister ID: #16077 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:38 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15								Date/Time Analyzed	Analyst		
	Results	ppbv	MDL	LOQ	Flag/Qual	ug/M³	MDL	LOQ	Dilution	PF		
cis-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25	6/15/16 17:14	RJW
Cyclohexane	ND	5.00	12.5			ND	17	43	1	25	6/15/16 17:14	RJW
Dichlorodifluoromethane	ND	12.5	12.5			ND	62	62	1	25	6/15/16 17:14	RJW
Ethyl acetate	ND	5.00	12.5			ND	18	45	1	25	6/15/16 17:14	RJW
Ethylbenzene	ND	5.00	12.5			ND	22	54	1	25	6/15/16 17:14	RJW
Heptane	ND	5.00	12.5			ND	20	51	1	25	6/15/16 17:14	RJW
Hexane	ND	5.00	12.5			ND	18	44	1	25	6/15/16 17:14	RJW
Isopropylbenzene	ND	5.00	12.5			ND	25	61	1	25	6/15/16 17:14	RJW
m+p-Xylenes	ND	10.0	25.0			ND	43	110	1	25	6/15/16 17:14	RJW
Methyl methacrylate	ND	5.00	12.5			ND	20	51	1	25	6/15/16 17:14	RJW
Methylene chloride	ND	12.5	25.0			ND	43	87	1	25	6/15/16 17:14	RJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5			ND	18	45	1	25	6/15/16 17:14	RJW
o-Xylene	ND	5.00	12.5			ND	22	54	1	25	6/15/16 17:14	RJW
Propylene	ND	5.00	12.5			ND	8.6	22	1	25	6/15/16 17:14	RJW
Styrene	ND	5.00	12.5			ND	21	53	1	25	6/15/16 17:14	RJW
TBA	ND	12.5	12.5			ND	38	38	1	25	6/15/16 17:14	RJW
Tetrachloroethylene (PCE)	ND	5.00	12.5			ND	34	85	1	25	6/15/16 17:14	RJW
Tetrahydrofuran	ND	5.00	12.5			ND	15	37	1	25	6/15/16 17:14	RJW
Toluene	ND	5.00	12.5			ND	19	47	1	25	6/15/16 17:14	RJW
trans-1,2-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25	6/15/16 17:14	RJW
trans-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25	6/15/16 17:14	RJW
Trichloroethylene	ND	5.00	12.5			ND	27	67	1	25	6/15/16 17:14	RJW
Trichlorofluoromethane	ND	12.5	12.5			ND	70	70	1	25	6/15/16 17:14	RJW
Vinyl acetate	ND	5.00	12.5			ND	18	44	1	25	6/15/16 17:14	RJW
Vinyl bromide	ND	5.00	12.5			ND	22	55	1	25	6/15/16 17:14	RJW
Vinyl chloride	ND	5.00	12.5			ND	13	32	1	25	6/15/16 17:14	RJW
Xylenes, Total	ND	15.0	37.5			ND	65	160	1	25	6/15/16 17:14	RJW
Surrogate(s)					% Recovery				% Recovery Limits			
4-Bromofluorobenzene					82.4				80-120		6/15/16 17:14	



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-7 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-07 Canister ID: #16078 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:41 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/14/16 16:39 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/14/16 16:39 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/14/16 16:39 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/14/16 16:39 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/14/16 16:39 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 16:39 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 16:39 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/14/16 16:39 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/14/16 16:39 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 16:39 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 16:39 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/14/16 16:39 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/14/16 16:39 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/14/16 16:39 RJJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/14/16 16:39 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 16:39 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 16:39 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/14/16 16:39 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/14/16 16:39 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/14/16 16:39 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/14/16 16:39 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/14/16 16:39 RJJW
Benzene	24.5	5.00	12.5		78	16	40	1	25	6/14/16 16:39 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/14/16 16:39 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/14/16 16:39 RJJW
Bromform	ND	5.00	12.5		ND	52	130	1	25	6/14/16 16:39 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/14/16 16:39 RJJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/14/16 16:39 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/14/16 16:39 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/14/16 16:39 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/14/16 16:39 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/14/16 16:39 RJJW
Chloromethane	18.5	5.00	12.5		38	10	26	1	25	6/14/16 16:39 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 16:39 RJJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-7 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-07 Canister ID: #16078 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:41 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/14/16 16:39 RJJW
Cyclohexane	31.5	5.00	12.5		110	17	43	1	25	6/14/16 16:39 RJJW
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/14/16 16:39 RJJW
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/14/16 16:39 RJJW
Ethylbenzene	ND	5.00	12.5		ND	22	54	1	25	6/14/16 16:39 RJJW
Heptane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 16:39 RJJW
Hexane	ND	5.00	12.5		ND	18	44	1	25	6/14/16 16:39 RJJW
Isopropylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/14/16 16:39 RJJW
m+p-Xylenes	ND	10.0	25.0		ND	43	110	1	25	6/14/16 16:39 RJJW
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/14/16 16:39 RJJW
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/14/16 16:39 RJJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/14/16 16:39 RJJW
o-Xylene	ND	5.00	12.5		ND	22	54	1	25	6/14/16 16:39 RJJW
Propylene	220	5.00	12.5		380	8.6	22	1	25	6/14/16 16:39 RJJW
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/14/16 16:39 RJJW
TBA	ND	12.5	12.5		ND	38	38	1	25	6/14/16 16:39 RJJW
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/14/16 16:39 RJJW
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/14/16 16:39 RJJW
Toluene	ND	5.00	12.5		ND	19	47	1	25	6/14/16 16:39 RJJW
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 16:39 RJJW
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/14/16 16:39 RJJW
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/14/16 16:39 RJJW
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/14/16 16:39 RJJW
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/14/16 16:39 RJJW
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/14/16 16:39 RJJW
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/14/16 16:39 RJJW
Xylenes, Total	ND	15.0	37.5		ND	65	160	1	25	6/14/16 16:39 RJJW
Surrogate(s)		% Recovery			% Recovery Limits					
4-Bromofluorobenzene		84.2			80-120					
					6/14/16 16:39					



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 3, 2016 16:58
		Date Issued:	June 21, 2016 12:05
Submitted To:	Joe France	Project Number:	36156.006
Client Site I.D.:	Fulton Gasworks - Air	Purchase Order:	

ANALYTICAL RESULTS

Project Location:	Sample Description/Location:	Initial Vacuum(in Hg): 30
Field Sample #: VP-8	Sub Description/Location:	Final Vacuum(in Hg):
Sample ID: 16F0127-08	Canister ID: #16079	Receipt Vacuum(in Hg): 4
Sample Matrix: Air	Canister Size: 1.4 L	Flow Controller Type:
Sampled: 6/3/2016 10:43		Flow Controller ID:
Sample Type:		

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv	MDL	LOQ	Flag/Qual	ug/M³				
1,1,1-Trichloroethane	ND	5.00	12.5			ND	27	68	1	25
1,1,1,2-Tetrachloroethane	ND	5.00	12.5			ND	34	86	1	25
1,1,2,2-Tetrachloroethane	ND	5.00	12.5			ND	34	86	1	25
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5			ND	38	96	1	25
1,1,2-Trichloroethane	ND	5.00	12.5			ND	27	68	1	25
1,1-Dichloroethane	ND	5.00	12.5			ND	20	51	1	25
1,1-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25
1,2,4-Trimethylbenzene	ND	5.00	12.5			ND	25	61	1	25
1,2-Dibromoethane (EDB)	ND	5.00	12.5			ND	38	96	1	25
1,2-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25
1,2-Dichloroethane	ND	5.00	12.5			ND	20	51	1	25
1,2-Dichloropropane	ND	5.00	12.5			ND	23	58	1	25
1,2-Dichlortetrafluoroethane	ND	5.00	12.5			ND	35	87	1	25
1,3,5-Trimethylbenzene	ND	5.00	12.5			ND	25	61	1	25
1,3-Butadiene	ND	5.00	12.5			ND	11	28	1	25
1,3-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25
1,4-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25
1,4-Dioxane	ND	5.00	12.5			ND	18	45	1	25
2-Butanone (MEK)	ND	5.00	12.5			ND	15	37	1	25
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5			ND	57	140	1	25
Acrolein	ND	5.00	12.5			ND	11	29	1	25
Allyl chloride	ND	5.00	12.5			ND	16	39	1	25
Benzene	ND	5.00	12.5			ND	16	40	1	25
Benzyl Chloride	ND	5.00	12.5			ND	26	65	1	25
Bromodichloromethane	ND	5.00	12.5			ND	34	84	1	25
Bromform	ND	5.00	12.5			ND	52	130	1	25
Bromomethane	ND	5.00	12.5			ND	19	49	1	25
Carbon Disulfide	ND	12.5	12.5			ND	39	39	1	25
Carbon Tetrachloride	ND	5.00	12.5			ND	31	79	1	25
Chlorobenzene	ND	5.00	12.5			ND	23	58	1	25
Chloroethane	ND	5.00	12.5			ND	13	33	1	25
Chloroform	ND	5.00	12.5			ND	24	61	1	25
Chloromethane	ND	5.00	12.5			ND	10	26	1	25
cis-1,2-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-8 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-08 Canister ID: #16079 Receipt Vacuum(in Hg): 4
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:43 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/18/16 15:32 RJJW
Cyclohexane	ND	5.00	12.5		ND	17	43	1	25	6/18/16 15:32 RJJW
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/18/16 15:32 RJJW
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/18/16 15:32 RJJW
Ethylbenzene	ND	5.00	12.5		ND	22	54	1	25	6/18/16 15:32 RJJW
Heptane	ND	5.00	12.5		ND	20	51	1	25	6/18/16 15:32 RJJW
Hexane	ND	5.00	12.5		ND	18	44	1	25	6/18/16 15:32 RJJW
Isopropylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/18/16 15:32 RJJW
m+p-Xylenes	ND	10.0	25.0		ND	43	110	1	25	6/18/16 15:32 RJJW
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/18/16 15:32 RJJW
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/18/16 15:32 RJJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/18/16 15:32 RJJW
o-Xylene	ND	5.00	12.5		ND	22	54	1	25	6/18/16 15:32 RJJW
Propylene	ND	5.00	12.5		ND	8.6	22	1	25	6/18/16 15:32 RJJW
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/18/16 15:32 RJJW
TBA	ND	12.5	12.5		ND	38	38	1	25	6/18/16 15:32 RJJW
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/18/16 15:32 RJJW
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/18/16 15:32 RJJW
Toluene	ND	5.00	12.5		ND	19	47	1	25	6/18/16 15:32 RJJW
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/18/16 15:32 RJJW
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/18/16 15:32 RJJW
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/18/16 15:32 RJJW
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/18/16 15:32 RJJW
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/18/16 15:32 RJJW
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/18/16 15:32 RJJW
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/18/16 15:32 RJJW
Xylenes, Total	ND	15.0	37.5		ND	65	160	1	25	6/18/16 15:32 RJJW
Surrogate(s)				% Recovery				% Recovery Limits		
4-Bromofluorobenzene				82.2				80-120		6/18/16 15:32



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-10 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-10 Canister ID: #16080 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:49 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/14/16 17:21 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/14/16 17:21 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/14/16 17:21 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/14/16 17:21 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/14/16 17:21 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 17:21 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 17:21 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/14/16 17:21 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/14/16 17:21 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 17:21 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 17:21 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/14/16 17:21 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/14/16 17:21 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/14/16 17:21 RJJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/14/16 17:21 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 17:21 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 17:21 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/14/16 17:21 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/14/16 17:21 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/14/16 17:21 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/14/16 17:21 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/14/16 17:21 RJJW
Benzene	107	5.00	12.5		340	16	40	1	25	6/14/16 17:21 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/14/16 17:21 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/14/16 17:21 RJJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/14/16 17:21 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/14/16 17:21 RJJW
Carbon Disulfide	23.8	12.5	12.5		74	39	39	1	25	6/14/16 17:21 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/14/16 17:21 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/14/16 17:21 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/14/16 17:21 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/14/16 17:21 RJJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/14/16 17:21 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 17:21 RJJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-10 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-10 Canister ID: #16080 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:49 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/14/16 17:21 RJW
Cyclohexane	15.5	5.00	12.5		53	17	43	1	25	6/14/16 17:21 RJW
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/14/16 17:21 RJW
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/14/16 17:21 RJW
Ethylbenzene	ND	5.00	12.5		ND	22	54	1	25	6/14/16 17:21 RJW
Heptane	8.00	5.00	12.5	J	33	20	51	1	25	6/14/16 17:21 RJW
Hexane	23.8	5.00	12.5		84	18	44	1	25	6/14/16 17:21 RJW
Isopropylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/14/16 17:21 RJW
m+p-Xylenes	ND	10.0	25.0		ND	43	110	1	25	6/14/16 17:21 RJW
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/14/16 17:21 RJW
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/14/16 17:21 RJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/14/16 17:21 RJW
o-Xylene	ND	5.00	12.5		ND	22	54	1	25	6/14/16 17:21 RJW
Propylene	201	5.00	12.5		350	8.6	22	1	25	6/14/16 17:21 RJW
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/14/16 17:21 RJW
TBA	ND	12.5	12.5		ND	38	38	1	25	6/14/16 17:21 RJW
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/14/16 17:21 RJW
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/14/16 17:21 RJW
Toluene	17.0	5.00	12.5		64	19	47	1	25	6/14/16 17:21 RJW
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 17:21 RJW
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/14/16 17:21 RJW
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/14/16 17:21 RJW
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/14/16 17:21 RJW
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/14/16 17:21 RJW
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/14/16 17:21 RJW
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/14/16 17:21 RJW
Xylenes, Total	ND	15.0	37.5		ND	65	160	1	25	6/14/16 17:21 RJW
Surrogate(s)		% Recovery			% Recovery Limits					
4-Bromofluorobenzene		87.2			80-120					
					6/14/16 17:21					



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-11 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-11 Canister ID: #16082 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:51 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	1.00	2.50		ND	5.5	14	1	5	6/14/16 18:08 RJW
1,1,1,2-Tetrachloroethane	ND	1.00	2.50		ND	6.9	17	1	5	6/14/16 18:08 RJW
1,1,2,2-Tetrachloroethane	ND	1.00	2.50		ND	6.9	17	1	5	6/14/16 18:08 RJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.00	2.50		ND	7.7	19	1	5	6/14/16 18:08 RJW
1,1,2-Trichloroethane	ND	1.00	2.50		ND	5.5	14	1	5	6/14/16 18:08 RJW
1,1-Dichloroethane	ND	1.00	2.50		ND	4.0	10	1	5	6/14/16 18:08 RJW
1,1-Dichloroethylene	ND	1.00	2.50		ND	4.0	9.9	1	5	6/14/16 18:08 RJW
1,2,4-Trimethylbenzene	ND	1.00	2.50		ND	4.9	12	1	5	6/14/16 18:08 RJW
1,2-Dibromoethane (EDB)	ND	1.00	2.50		ND	7.7	19	1	5	6/14/16 18:08 RJW
1,2-Dichlorobenzene	ND	1.00	2.50		ND	6.0	15	1	5	6/14/16 18:08 RJW
1,2-Dichloroethane	ND	1.00	2.50		ND	4.0	10	1	5	6/14/16 18:08 RJW
1,2-Dichloropropane	ND	1.00	2.50		ND	4.6	12	1	5	6/14/16 18:08 RJW
1,2-Dichlorotetrafluoroethane	ND	1.00	2.50		ND	7.0	17	1	5	6/14/16 18:08 RJW
1,3,5-Trimethylbenzene	ND	1.00	2.50		ND	4.9	12	1	5	6/14/16 18:08 RJW
1,3-Butadiene	ND	1.00	2.50		ND	2.2	5.5	1	5	6/14/16 18:08 RJW
1,3-Dichlorobenzene	ND	1.00	2.50		ND	6.0	15	1	5	6/14/16 18:08 RJW
1,4-Dichlorobenzene	ND	1.00	2.50		ND	6.0	15	1	5	6/14/16 18:08 RJW
1,4-Dioxane	ND	1.00	2.50		ND	3.6	9.0	1	5	6/14/16 18:08 RJW
2-Butanone (MEK)	ND	1.00	2.50		ND	2.9	7.4	1	5	6/14/16 18:08 RJW
4-Methyl-2-pentanone (MIBK)	ND	1.00	2.50		ND	11	29	1	5	6/14/16 18:08 RJW
Acrolein	ND	1.00	2.50		ND	2.3	5.7	1	5	6/14/16 18:08 RJW
Allyl chloride	ND	1.00	2.50		ND	3.1	7.8	1	5	6/14/16 18:08 RJW
Benzene	ND	1.00	2.50		ND	3.2	8.0	1	5	6/14/16 18:08 RJW
Benzyl Chloride	ND	1.00	2.50		ND	5.2	13	1	5	6/14/16 18:08 RJW
Bromodichloromethane	ND	1.00	2.50		ND	6.7	17	1	5	6/14/16 18:08 RJW
Bromoform	ND	1.00	2.50		ND	10	26	1	5	6/14/16 18:08 RJW
Bromomethane	ND	1.00	2.50		ND	3.9	9.7	1	5	6/14/16 18:08 RJW
Carbon Disulfide	ND	2.50	2.50		ND	7.8	7.8	1	5	6/14/16 18:08 RJW
Carbon Tetrachloride	ND	1.00	2.50		ND	6.3	16	1	5	6/14/16 18:08 RJW
Chlorobenzene	ND	1.00	2.50		ND	4.6	12	1	5	6/14/16 18:08 RJW
Chloroethane	ND	1.00	2.50		ND	2.6	6.6	1	5	6/14/16 18:08 RJW
Chloroform	ND	1.00	2.50		ND	4.9	12	1	5	6/14/16 18:08 RJW
Chloromethane	ND	1.00	2.50		ND	2.1	5.2	1	5	6/14/16 18:08 RJW
cis-1,2-Dichloroethylene	ND	1.00	2.50		ND	4.0	9.9	1	5	6/14/16 18:08 RJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-11 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-11 Canister ID: #16082 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:51 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	1.00	2.50		ND	4.5	11	1	5	6/14/16 18:08 RJW
Cyclohexane	3.65	1.00	2.50		13	3.4	8.6	1	5	6/14/16 18:08 RJW
Dichlorodifluoromethane	ND	2.50	2.50		ND	12	12	1	5	6/14/16 18:08 RJW
Ethyl acetate	ND	1.00	2.50		ND	3.6	9.0	1	5	6/14/16 18:08 RJW
Ethylbenzene	ND	1.00	2.50		ND	4.3	11	1	5	6/14/16 18:08 RJW
Heptane	ND	1.00	2.50		ND	4.1	10	1	5	6/14/16 18:08 RJW
Hexane	ND	1.00	2.50		ND	3.5	8.8	1	5	6/14/16 18:08 RJW
Isopropylbenzene	ND	1.00	2.50		ND	4.9	12	1	5	6/14/16 18:08 RJW
m+p-Xylenes	ND	2.00	5.00		ND	8.7	22	1	5	6/14/16 18:08 RJW
Methyl methacrylate	ND	1.00	2.50		ND	4.1	10	1	5	6/14/16 18:08 RJW
Methylene chloride	ND	2.50	5.00		ND	8.7	17	1	5	6/14/16 18:08 RJW
Methyl-t-butyl ether (MTBE)	ND	1.00	2.50		ND	3.6	9.0	1	5	6/14/16 18:08 RJW
o-Xylene	ND	1.00	2.50		ND	4.3	11	1	5	6/14/16 18:08 RJW
Propylene	39.0	1.00	2.50		67	1.7	4.3	1	5	6/14/16 18:08 RJW
Styrene	ND	1.00	2.50		ND	4.3	11	1	5	6/14/16 18:08 RJW
TBA	ND	2.50	2.50		ND	7.6	7.6	1	5	6/14/16 18:08 RJW
Tetrachloroethylene (PCE)	ND	1.00	2.50		ND	6.8	17	1	5	6/14/16 18:08 RJW
Tetrahydrofuran	ND	1.00	2.50		ND	2.9	7.4	1	5	6/14/16 18:08 RJW
Toluene	ND	1.00	2.50		ND	3.8	9.4	1	5	6/14/16 18:08 RJW
trans-1,2-Dichloroethylene	ND	1.00	2.50		ND	4.0	9.9	1	5	6/14/16 18:08 RJW
trans-1,3-Dichloropropene	ND	1.00	2.50		ND	4.5	11	1	5	6/14/16 18:08 RJW
Trichloroethylene	ND	1.00	2.50		ND	5.4	13	1	5	6/14/16 18:08 RJW
Trichlorofluoromethane	ND	2.50	2.50		ND	14	14	1	5	6/14/16 18:08 RJW
Vinyl acetate	ND	1.00	2.50		ND	3.5	8.8	1	5	6/14/16 18:08 RJW
Vinyl bromide	ND	1.00	2.50		ND	4.4	11	1	5	6/14/16 18:08 RJW
Vinyl chloride	ND	1.00	2.50		ND	2.6	6.4	1	5	6/14/16 18:08 RJW
Xylenes, Total	ND	3.00	7.50		ND	13	33	1	5	6/14/16 18:08 RJW

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	98.2	80-120	6/14/16 18:08



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-12 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-12 Canister ID: #16083 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:54 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/15/16 20:46 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/15/16 20:46 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/15/16 20:46 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/15/16 20:46 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/15/16 20:46 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/15/16 20:46 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/15/16 20:46 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/15/16 20:46 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/15/16 20:46 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 20:46 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/15/16 20:46 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/15/16 20:46 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/15/16 20:46 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/15/16 20:46 RJJW
1,3-Butadiene	11.8	5.00	12.5	J	26	11	28	1	25	6/15/16 20:46 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 20:46 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/15/16 20:46 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/15/16 20:46 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/15/16 20:46 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/15/16 20:46 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/15/16 20:46 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/15/16 20:46 RJJW
Benzene	176	5.00	12.5		560	16	40	1	25	6/15/16 20:46 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/15/16 20:46 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/15/16 20:46 RJJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/15/16 20:46 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/15/16 20:46 RJJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/15/16 20:46 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/15/16 20:46 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/15/16 20:46 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/15/16 20:46 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/15/16 20:46 RJJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/15/16 20:46 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/15/16 20:46 RJJW



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-12 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-12 Canister ID: #16083 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:54 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/15/16 20:46 RJJW
Cyclohexane	ND	5.00	12.5		ND	17	43	1	25	6/15/16 20:46 RJJW
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/15/16 20:46 RJJW
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/15/16 20:46 RJJW
Ethylbenzene	ND	5.00	12.5		ND	22	54	1	25	6/15/16 20:46 RJJW
Heptane	ND	5.00	12.5		ND	20	51	1	25	6/15/16 20:46 RJJW
Hexane	ND	5.00	12.5		ND	18	44	1	25	6/15/16 20:46 RJJW
Isopropylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/15/16 20:46 RJJW
m+p-Xylenes	ND	10.0	25.0		ND	43	110	1	25	6/15/16 20:46 RJJW
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/15/16 20:46 RJJW
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/15/16 20:46 RJJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/15/16 20:46 RJJW
o-Xylene	ND	5.00	12.5		ND	22	54	1	25	6/15/16 20:46 RJJW
Propylene	63.2	5.00	12.5		110	8.6	22	1	25	6/15/16 20:46 RJJW
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/15/16 20:46 RJJW
TBA	ND	12.5	12.5		ND	38	38	1	25	6/15/16 20:46 RJJW
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/15/16 20:46 RJJW
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/15/16 20:46 RJJW
Toluene	17.5	5.00	12.5		66	19	47	1	25	6/15/16 20:46 RJJW
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/15/16 20:46 RJJW
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/15/16 20:46 RJJW
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/15/16 20:46 RJJW
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/15/16 20:46 RJJW
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/15/16 20:46 RJJW
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/15/16 20:46 RJJW
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/15/16 20:46 RJJW
Xylenes, Total	ND	15.0	37.5		ND	65	160	1	25	6/15/16 20:46 RJJW
Surrogate(s)		% Recovery			% Recovery Limits					
4-Bromofluorobenzene		81.0			80-120					
					6/15/16 20:46					



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-13 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-13 Canister ID: #16084 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:58 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
1,1,1-Trichloroethane	ND	20.0	50.0		ND	110	270	1	100	6/16/16 17:46 RJJW
1,1,1,2-Tetrachloroethane	ND	20.0	50.0		ND	140	340	1	100	6/16/16 17:46 RJJW
1,1,2,2-Tetrachloroethane	ND	20.0	50.0		ND	140	340	1	100	6/16/16 17:46 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	20.0	50.0		ND	150	380	1	100	6/16/16 17:46 RJJW
1,1,2-Trichloroethane	ND	20.0	50.0		ND	110	270	1	100	6/16/16 17:46 RJJW
1,1-Dichloroethane	ND	20.0	50.0		ND	81	200	1	100	6/16/16 17:46 RJJW
1,1-Dichloroethylene	ND	20.0	50.0		ND	79	200	1	100	6/16/16 17:46 RJJW
1,2,4-Trimethylbenzene	121	20.0	50.0		590	98	250	1	100	6/16/16 17:46 RJJW
1,2-Dibromoethane (EDB)	ND	20.0	50.0		ND	150	380	1	100	6/16/16 17:46 RJJW
1,2-Dichlorobenzene	ND	20.0	50.0		ND	120	300	1	100	6/16/16 17:46 RJJW
1,2-Dichloroethane	ND	20.0	50.0		ND	81	200	1	100	6/16/16 17:46 RJJW
1,2-Dichloropropane	ND	20.0	50.0		ND	92	230	1	100	6/16/16 17:46 RJJW
1,2-Dichlorotetrafluoroethane	ND	20.0	50.0		ND	140	350	1	100	6/16/16 17:46 RJJW
1,3,5-Trimethylbenzene	72.0	20.0	50.0		350	98	250	1	100	6/16/16 17:46 RJJW
1,3-Butadiene	ND	20.0	50.0		ND	44	110	1	100	6/16/16 17:46 RJJW
1,3-Dichlorobenzene	ND	20.0	50.0		ND	120	300	1	100	6/16/16 17:46 RJJW
1,4-Dichlorobenzene	ND	20.0	50.0		ND	120	300	1	100	6/16/16 17:46 RJJW
1,4-Dioxane	ND	20.0	50.0		ND	72	180	1	100	6/16/16 17:46 RJJW
2-Butanone (MEK)	ND	20.0	50.0		ND	59	150	1	100	6/16/16 17:46 RJJW
4-Methyl-2-pentanone (MIBK)	ND	20.0	50.0		ND	230	570	1	100	6/16/16 17:46 RJJW
Acrolein	ND	20.0	50.0		ND	46	110	1	100	6/16/16 17:46 RJJW
Allyl chloride	ND	20.0	50.0		ND	63	160	1	100	6/16/16 17:46 RJJW
Benzene	56.0	20.0	50.0		180	64	160	1	100	6/16/16 17:46 RJJW
Benzyl Chloride	ND	20.0	50.0		ND	100	260	1	100	6/16/16 17:46 RJJW
Bromodichloromethane	ND	20.0	50.0		ND	130	340	1	100	6/16/16 17:46 RJJW
Bromform	ND	20.0	50.0		ND	210	520	1	100	6/16/16 17:46 RJJW
Bromomethane	ND	20.0	50.0		ND	78	190	1	100	6/16/16 17:46 RJJW
Carbon Disulfide	ND	50.0	50.0		ND	160	160	1	100	6/16/16 17:46 RJJW
Carbon Tetrachloride	ND	20.0	50.0		ND	130	310	1	100	6/16/16 17:46 RJJW
Chlorobenzene	ND	20.0	50.0		ND	92	230	1	100	6/16/16 17:46 RJJW
Chloroethane	ND	20.0	50.0		ND	53	130	1	100	6/16/16 17:46 RJJW
Chloroform	ND	20.0	50.0		ND	98	240	1	100	6/16/16 17:46 RJJW
Chloromethane	ND	20.0	50.0		ND	41	100	1	100	6/16/16 17:46 RJJW
cis-1,2-Dichloroethylene	ND	20.0	50.0		ND	79	200	1	100	6/16/16 17:46 RJJW



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-13 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-13 Canister ID: #16084 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 10:58 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
cis-1,3-Dichloropropene	ND	20.0	50.0		ND	91	230	1	100	6/16/16 17:46
Cyclohexane	ND	20.0	50.0		ND	69	170	1	100	6/16/16 17:46
Dichlorodifluoromethane	ND	50.0	50.0		ND	250	250	1	100	6/16/16 17:46
Ethyl acetate	ND	20.0	50.0		ND	72	180	1	100	6/16/16 17:46
Ethylbenzene	ND	20.0	50.0		ND	87	220	1	100	6/16/16 17:46
Heptane	143	20.0	50.0		590	82	200	1	100	6/16/16 17:46
Hexane	262	20.0	50.0		920	70	180	1	100	6/16/16 17:46
Isopropylbenzene	ND	20.0	50.0		ND	98	250	1	100	6/16/16 17:46
m+p-Xylenes	99.0	40.0	100	J	430	170	430	1	100	6/16/16 17:46
Methyl methacrylate	ND	20.0	50.0		ND	82	200	1	100	6/16/16 17:46
Methylene chloride	ND	50.0	100		ND	170	350	1	100	6/16/16 17:46
Methyl-t-butyl ether (MTBE)	ND	20.0	50.0		ND	72	180	1	100	6/16/16 17:46
o-Xylene	54.0	20.0	50.0		230	87	220	1	100	6/16/16 17:46
Propylene	ND	20.0	50.0		ND	34	86	1	100	6/16/16 17:46
Styrene	64.0	20.0	50.0		270	85	210	1	100	6/16/16 17:46
TBA	ND	50.0	50.0		ND	150	150	1	100	6/16/16 17:46
Tetrachloroethylene (PCE)	ND	20.0	50.0		ND	140	340	1	100	6/16/16 17:46
Tetrahydrofuran	ND	20.0	50.0		ND	59	150	1	100	6/16/16 17:46
Toluene	80.0	20.0	50.0		300	75	190	1	100	6/16/16 17:46
trans-1,2-Dichloroethylene	ND	20.0	50.0		ND	79	200	1	100	6/16/16 17:46
trans-1,3-Dichloropropene	ND	20.0	50.0		ND	91	230	1	100	6/16/16 17:46
Trichloroethylene	ND	20.0	50.0		ND	110	270	1	100	6/16/16 17:46
Trichlorofluoromethane	ND	50.0	50.0		ND	280	280	1	100	6/16/16 17:46
Vinyl acetate	ND	20.0	50.0		ND	70	180	1	100	6/16/16 17:46
Vinyl bromide	ND	20.0	50.0		ND	87	220	1	100	6/16/16 17:46
Vinyl chloride	ND	20.0	50.0		ND	51	130	1	100	6/16/16 17:46
Xylenes, Total	153	60.0	150		660	260	650	1	100	6/16/16 17:46

Surrogate(s)	% Recovery	% Recovery Limits		
4-Bromofluorobenzene	335 *	S	80-120	6/16/16 17:46



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-14 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-14 Canister ID: #16085 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:01 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
1,1,1-Trichloroethane	ND	20.0	50.0		ND	110	270	1	100	6/16/16 19:08 RJJW
1,1,1,2-Tetrachloroethane	ND	20.0	50.0		ND	140	340	1	100	6/16/16 19:08 RJJW
1,1,2,2-Tetrachloroethane	ND	20.0	50.0		ND	140	340	1	100	6/16/16 19:08 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	20.0	50.0		ND	150	380	1	100	6/16/16 19:08 RJJW
1,1,2-Trichloroethane	ND	20.0	50.0		ND	110	270	1	100	6/16/16 19:08 RJJW
1,1-Dichloroethane	ND	20.0	50.0		ND	81	200	1	100	6/16/16 19:08 RJJW
1,1-Dichloroethylene	ND	20.0	50.0		ND	79	200	1	100	6/16/16 19:08 RJJW
1,2,4-Trimethylbenzene	963	20.0	50.0		4700	98	250	1	100	6/16/16 19:08 RJJW
1,2-Dibromoethane (EDB)	ND	20.0	50.0		ND	150	380	1	100	6/16/16 19:08 RJJW
1,2-Dichlorobenzene	ND	20.0	50.0		ND	120	300	1	100	6/16/16 19:08 RJJW
1,2-Dichloroethane	ND	20.0	50.0		ND	81	200	1	100	6/16/16 19:08 RJJW
1,2-Dichloropropane	ND	20.0	50.0		ND	92	230	1	100	6/16/16 19:08 RJJW
1,2-Dichlorotetrafluoroethane	ND	20.0	50.0		ND	140	350	1	100	6/16/16 19:08 RJJW
1,3,5-Trimethylbenzene	348	20.0	50.0		1700	98	250	1	100	6/16/16 19:08 RJJW
1,3-Butadiene	ND	20.0	50.0		ND	44	110	1	100	6/16/16 19:08 RJJW
1,3-Dichlorobenzene	ND	20.0	50.0		ND	120	300	1	100	6/16/16 19:08 RJJW
1,4-Dichlorobenzene	ND	20.0	50.0		ND	120	300	1	100	6/16/16 19:08 RJJW
1,4-Dioxane	ND	20.0	50.0		ND	72	180	1	100	6/16/16 19:08 RJJW
2-Butanone (MEK)	ND	20.0	50.0		ND	59	150	1	100	6/16/16 19:08 RJJW
4-Methyl-2-pentanone (MIBK)	ND	20.0	50.0		ND	230	570	1	100	6/16/16 19:08 RJJW
Acrolein	ND	20.0	50.0		ND	46	110	1	100	6/16/16 19:08 RJJW
Allyl chloride	ND	20.0	50.0		ND	63	160	1	100	6/16/16 19:08 RJJW
Benzene	138	20.0	50.0		440	64	160	1	100	6/16/16 19:08 RJJW
Benzyl Chloride	ND	20.0	50.0		ND	100	260	1	100	6/16/16 19:08 RJJW
Bromodichloromethane	ND	20.0	50.0		ND	130	340	1	100	6/16/16 19:08 RJJW
Bromform	ND	20.0	50.0		ND	210	520	1	100	6/16/16 19:08 RJJW
Bromomethane	ND	20.0	50.0		ND	78	190	1	100	6/16/16 19:08 RJJW
Carbon Disulfide	ND	50.0	50.0		ND	160	160	1	100	6/16/16 19:08 RJJW
Carbon Tetrachloride	ND	20.0	50.0		ND	130	310	1	100	6/16/16 19:08 RJJW
Chlorobenzene	ND	20.0	50.0		ND	92	230	1	100	6/16/16 19:08 RJJW
Chloroethane	ND	20.0	50.0		ND	53	130	1	100	6/16/16 19:08 RJJW
Chloroform	ND	20.0	50.0		ND	98	240	1	100	6/16/16 19:08 RJJW
Chloromethane	ND	20.0	50.0		ND	41	100	1	100	6/16/16 19:08 RJJW
cis-1,2-Dichloroethylene	ND	20.0	50.0		ND	79	200	1	100	6/16/16 19:08 RJJW



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-14 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-14 Canister ID: #16085 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:01 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
cis-1,3-Dichloropropene	ND	20.0	50.0		ND	91	230	1	100	6/16/16 19:08
Cyclohexane	ND	20.0	50.0		ND	69	170	1	100	6/16/16 19:08
Dichlorodifluoromethane	ND	50.0	50.0		ND	250	250	1	100	6/16/16 19:08
Ethyl acetate	ND	20.0	50.0		ND	72	180	1	100	6/16/16 19:08
Ethylbenzene	420	20.0	50.0		1800	87	220	1	100	6/16/16 19:08
Heptane	ND	20.0	50.0		ND	82	200	1	100	6/16/16 19:08
Hexane	ND	20.0	50.0		ND	70	180	1	100	6/16/16 19:08
Isopropylbenzene	102	20.0	50.0		500	98	250	1	100	6/16/16 19:08
m+p-Xylenes	189	40.0	100		820	170	430	1	100	6/16/16 19:08
Methyl methacrylate	ND	20.0	50.0		ND	82	200	1	100	6/16/16 19:08
Methylene chloride	ND	50.0	100		ND	170	350	1	100	6/16/16 19:08
Methyl-t-butyl ether (MTBE)	ND	20.0	50.0		ND	72	180	1	100	6/16/16 19:08
o-Xylene	ND	20.0	50.0		ND	87	220	1	100	6/16/16 19:08
Propylene	ND	20.0	50.0		ND	34	86	1	100	6/16/16 19:08
Styrene	ND	20.0	50.0		ND	85	210	1	100	6/16/16 19:08
TBA	ND	50.0	50.0		ND	150	150	1	100	6/16/16 19:08
Tetrachloroethylene (PCE)	ND	20.0	50.0		ND	140	340	1	100	6/16/16 19:08
Tetrahydrofuran	ND	20.0	50.0		ND	59	150	1	100	6/16/16 19:08
Toluene	ND	20.0	50.0		ND	75	190	1	100	6/16/16 19:08
trans-1,2-Dichloroethylene	ND	20.0	50.0		ND	79	200	1	100	6/16/16 19:08
trans-1,3-Dichloropropene	ND	20.0	50.0		ND	91	230	1	100	6/16/16 19:08
Trichloroethylene	ND	20.0	50.0		ND	110	270	1	100	6/16/16 19:08
Trichlorofluoromethane	ND	50.0	50.0		ND	280	280	1	100	6/16/16 19:08
Vinyl acetate	ND	20.0	50.0		ND	70	180	1	100	6/16/16 19:08
Vinyl bromide	ND	20.0	50.0		ND	87	220	1	100	6/16/16 19:08
Vinyl chloride	ND	20.0	50.0		ND	51	130	1	100	6/16/16 19:08
Xylenes, Total	189	60.0	150		820	260	650	1	100	6/16/16 19:08

Surrogate(s)	% Recovery	% Recovery Limits			
4-Bromofluorobenzene	354 *	S	80-120		6/16/16 19:08



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-15 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-15 Canister ID: #16086 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:06 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	10.0	25.0		ND	55	140	1	50	6/14/16 18:03 RJW
1,1,1,2-Tetrachloroethane	ND	10.0	25.0		ND	69	170	1	50	6/14/16 18:03 RJW
1,1,2,2-Tetrachloroethane	ND	10.0	25.0		ND	69	170	1	50	6/14/16 18:03 RJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	10.0	25.0		ND	77	190	1	50	6/14/16 18:03 RJW
1,1,2-Trichloroethane	ND	10.0	25.0		ND	55	140	1	50	6/14/16 18:03 RJW
1,1-Dichloroethane	ND	10.0	25.0		ND	40	100	1	50	6/14/16 18:03 RJW
1,1-Dichloroethylene	ND	10.0	25.0		ND	40	99	1	50	6/14/16 18:03 RJW
1,2,4-Trimethylbenzene	462	10.0	25.0		2300	49	120	1	50	6/14/16 18:03 RJW
1,2-Dibromoethane (EDB)	ND	10.0	25.0		ND	77	190	1	50	6/14/16 18:03 RJW
1,2-Dichlorobenzene	ND	10.0	25.0		ND	60	150	1	50	6/14/16 18:03 RJW
1,2-Dichloroethane	ND	10.0	25.0		ND	40	100	1	50	6/14/16 18:03 RJW
1,2-Dichloropropane	ND	10.0	25.0		ND	46	120	1	50	6/14/16 18:03 RJW
1,2-Dichlortetrafluoroethane	ND	10.0	25.0		ND	70	170	1	50	6/14/16 18:03 RJW
1,3,5-Trimethylbenzene	170	10.0	25.0		840	49	120	1	50	6/14/16 18:03 RJW
1,3-Butadiene	ND	10.0	25.0		ND	22	55	1	50	6/14/16 18:03 RJW
1,3-Dichlorobenzene	ND	10.0	25.0		ND	60	150	1	50	6/14/16 18:03 RJW
1,4-Dichlorobenzene	ND	10.0	25.0		ND	60	150	1	50	6/14/16 18:03 RJW
1,4-Dioxane	ND	10.0	25.0		ND	36	90	1	50	6/14/16 18:03 RJW
2-Butanone (MEK)	ND	10.0	25.0		ND	29	74	1	50	6/14/16 18:03 RJW
4-Methyl-2-pentanone (MIBK)	ND	10.0	25.0		ND	110	290	1	50	6/14/16 18:03 RJW
Acrolein	ND	10.0	25.0		ND	23	57	1	50	6/14/16 18:03 RJW
Allyl chloride	ND	10.0	25.0		ND	31	78	1	50	6/14/16 18:03 RJW
Benzene	248	10.0	25.0		790	32	80	1	50	6/14/16 18:03 RJW
Benzyl Chloride	ND	10.0	25.0		ND	52	130	1	50	6/14/16 18:03 RJW
Bromodichloromethane	ND	10.0	25.0		ND	67	170	1	50	6/14/16 18:03 RJW
Bromform	ND	10.0	25.0		ND	100	260	1	50	6/14/16 18:03 RJW
Bromomethane	ND	10.0	25.0		ND	39	97	1	50	6/14/16 18:03 RJW
Carbon Disulfide	ND	25.0	25.0		ND	78	78	1	50	6/14/16 18:03 RJW
Carbon Tetrachloride	ND	10.0	25.0		ND	63	160	1	50	6/14/16 18:03 RJW
Chlorobenzene	ND	10.0	25.0		ND	46	120	1	50	6/14/16 18:03 RJW
Chloroethane	ND	10.0	25.0		ND	26	66	1	50	6/14/16 18:03 RJW
Chloroform	ND	10.0	25.0		ND	49	120	1	50	6/14/16 18:03 RJW
Chloromethane	ND	10.0	25.0		ND	21	52	1	50	6/14/16 18:03 RJW
cis-1,2-Dichloroethylene	ND	10.0	25.0		ND	40	99	1	50	6/14/16 18:03 RJW



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-15 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-15 Canister ID: #16086 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:06 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	10.0	25.0		ND	45	110	1	50	6/14/16 18:03 RJJW
Cyclohexane	ND	10.0	25.0		ND	34	86	1	50	6/14/16 18:03 RJJW
Dichlorodifluoromethane	ND	25.0	25.0		ND	120	120	1	50	6/14/16 18:03 RJJW
Ethyl acetate	ND	10.0	25.0		ND	36	90	1	50	6/14/16 18:03 RJJW
Ethylbenzene	76.5	10.0	25.0		330	43	110	1	50	6/14/16 18:03 RJJW
Heptane	ND	10.0	25.0		ND	41	100	1	50	6/14/16 18:03 RJJW
Hexane	ND	10.0	25.0		ND	35	88	1	50	6/14/16 18:03 RJJW
Isopropylbenzene	47.0	10.0	25.0		230	49	120	1	50	6/14/16 18:03 RJJW
m+p-Xylenes	62.5	20.0	50.0		270	87	220	1	50	6/14/16 18:03 RJJW
Methyl methacrylate	ND	10.0	25.0		ND	41	100	1	50	6/14/16 18:03 RJJW
Methylene chloride	ND	25.0	50.0		ND	87	170	1	50	6/14/16 18:03 RJJW
Methyl-t-butyl ether (MTBE)	ND	10.0	25.0		ND	36	90	1	50	6/14/16 18:03 RJJW
Naphthalene	345	12.5	31.2		1800	66	160	1	62.5	6/20/16 15:29 RJJW
o-Xylene	ND	10.0	25.0		ND	43	110	1	50	6/14/16 18:03 RJJW
Propylene	33.0	10.0	25.0		57	17	43	1	50	6/14/16 18:03 RJJW
Styrene	ND	10.0	25.0		ND	43	110	1	50	6/14/16 18:03 RJJW
TBA	ND	25.0	25.0		ND	76	76	1	50	6/14/16 18:03 RJJW
Tetrachloroethylene (PCE)	ND	10.0	25.0		ND	68	170	1	50	6/14/16 18:03 RJJW
Tetrahydrofuran	ND	10.0	25.0		ND	29	74	1	50	6/14/16 18:03 RJJW
Toluene	90.0	10.0	25.0		340	38	94	1	50	6/14/16 18:03 RJJW
trans-1,2-Dichloroethylene	ND	10.0	25.0		ND	40	99	1	50	6/14/16 18:03 RJJW
trans-1,3-Dichloropropene	ND	10.0	25.0		ND	45	110	1	50	6/14/16 18:03 RJJW
Trichloroethylene	ND	10.0	25.0		ND	54	130	1	50	6/14/16 18:03 RJJW
Trichlorofluoromethane	ND	25.0	25.0		ND	140	140	1	50	6/14/16 18:03 RJJW
Vinyl acetate	ND	10.0	25.0		ND	35	88	1	50	6/14/16 18:03 RJJW
Vinyl bromide	ND	10.0	25.0		ND	44	110	1	50	6/14/16 18:03 RJJW
Vinyl chloride	ND	10.0	25.0		ND	26	64	1	50	6/14/16 18:03 RJJW
Xylenes, Total	62.5	30.0	75.0	J	270	130	330	1	50	6/14/16 18:03 RJJW

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	99.6	80-120	6/20/16 15:29
4-Bromofluorobenzene	92.8	80-120	6/14/16 18:03



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location:	Sample Description/Location:	Initial Vacuum(in Hg): 30
Field Sample #: VP-16	Sub Description/Location:	Final Vacuum(in Hg):
Sample ID: 16F0127-16	Canister ID: #16045	Receipt Vacuum(in Hg): 2
Sample Matrix: Air	Canister Size: 1.4 L	Flow Controller Type:
Sampled: 6/3/2016 11:03		Flow Controller ID:
Sample Type:		

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/14/16 18:44 RJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/14/16 18:44 RJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/14/16 18:44 RJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/14/16 18:44 RJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/14/16 18:44 RJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 18:44 RJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 18:44 RJW
1,2,4-Trimethylbenzene	1480	50.0	125		7300	250	610	1	250	6/16/16 15:11 RJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/14/16 18:44 RJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 18:44 RJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 18:44 RJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/14/16 18:44 RJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/14/16 18:44 RJW
1,3,5-Trimethylbenzene	738	50.0	125		3600	250	610	1	250	6/16/16 15:11 RJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/14/16 18:44 RJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 18:44 RJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/14/16 18:44 RJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/14/16 18:44 RJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/14/16 18:44 RJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/14/16 18:44 RJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/14/16 18:44 RJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/14/16 18:44 RJW
Benzene	780	50.0	125		2500	160	400	1	250	6/16/16 15:11 RJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/14/16 18:44 RJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/14/16 18:44 RJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/14/16 18:44 RJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/14/16 18:44 RJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/14/16 18:44 RJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/14/16 18:44 RJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/14/16 18:44 RJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/14/16 18:44 RJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/14/16 18:44 RJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/14/16 18:44 RJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 18:44 RJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-16 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-16 Canister ID: #16045 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:03 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL				
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/14/16 18:44 RJW
Cyclohexane	ND	5.00	12.5		ND	17	43	1	25	6/14/16 18:44 RJW
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/14/16 18:44 RJW
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/14/16 18:44 RJW
Ethylbenzene	1140	50.0	125		4900	220	540	1	250	6/16/16 15:11 RJW
Heptane	ND	5.00	12.5		ND	20	51	1	25	6/14/16 18:44 RJW
Hexane	ND	5.00	12.5		ND	18	44	1	25	6/14/16 18:44 RJW
Isopropylbenzene	228	5.00	12.5		1100	25	61	1	25	6/14/16 18:44 RJW
m+p-Xylenes	2150	100	250		9300	430	1100	1	250	6/16/16 15:11 RJW
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/14/16 18:44 RJW
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/14/16 18:44 RJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/14/16 18:44 RJW
Naphthalene	1200	50.0	125		6300	260	660	1	250	6/16/16 15:11 RJW
o-Xylene	1200	50.0	125		5200	220	540	1	250	6/16/16 15:11 RJW
Propylene	66.0	5.00	12.5		110	8.6	22	1	25	6/14/16 18:44 RJW
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/14/16 18:44 RJW
TBA	ND	12.5	12.5		ND	38	38	1	25	6/14/16 18:44 RJW
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/14/16 18:44 RJW
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/14/16 18:44 RJW
Toluene	1320	50.0	125		5000	190	470	1	250	6/16/16 15:11 RJW
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/14/16 18:44 RJW
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/14/16 18:44 RJW
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/14/16 18:44 RJW
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/14/16 18:44 RJW
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/14/16 18:44 RJW
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/14/16 18:44 RJW
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/14/16 18:44 RJW
Xylenes, Total	3340	150	375		15000	650	1600	1	250	6/16/16 15:11 RJW
Surrogate(s)	% Recovery			% Recovery Limits						
4-Bromofluorobenzene	92.0			80-120				6/16/16 15:11		
4-Bromofluorobenzene	115			80-120				6/14/16 18:44		



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 3, 2016 16:58
		Date Issued:	June 21, 2016 12:05
Submitted To:	Joe France	Project Number:	36156.006
Client Site I.D.:	Fulton Gasworks - Air	Purchase Order:	

ANALYTICAL RESULTS

Project Location:	Sample Description/Location:	Initial Vacuum(in Hg): 30
Field Sample #: VP-17	Sub Description/Location:	Final Vacuum(in Hg):
Sample ID: 16F0127-17	Canister ID: #16173	Receipt Vacuum(in Hg): 2
Sample Matrix: Air	Canister Size: 1.4 L	Flow Controller Type:
Sampled: 6/3/2016 11:09		Flow Controller ID:
Sample Type:		

Analyte	EPA TO-15						PF	Date/Time Analyzed	Analyst			
	Results	ppbv	MDL	LOQ	Flag/Qual	ug/M³	Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5			ND	27	68	1	25	6/18/16 16:55	RJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5			ND	34	86	1	25	6/18/16 16:55	RJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5			ND	34	86	1	25	6/18/16 16:55	RJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5			ND	38	96	1	25	6/18/16 16:55	RJW
1,1,2-Trichloroethane	ND	5.00	12.5			ND	27	68	1	25	6/18/16 16:55	RJW
1,1-Dichloroethane	ND	5.00	12.5			ND	20	51	1	25	6/18/16 16:55	RJW
1,1-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25	6/18/16 16:55	RJW
1,2,4-Trimethylbenzene	ND	5.00	12.5			ND	25	61	1	25	6/18/16 16:55	RJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5			ND	38	96	1	25	6/18/16 16:55	RJW
1,2-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25	6/18/16 16:55	RJW
1,2-Dichloroethane	ND	5.00	12.5			ND	20	51	1	25	6/18/16 16:55	RJW
1,2-Dichloropropane	ND	5.00	12.5			ND	23	58	1	25	6/18/16 16:55	RJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5			ND	35	87	1	25	6/18/16 16:55	RJW
1,3,5-Trimethylbenzene	ND	5.00	12.5			ND	25	61	1	25	6/18/16 16:55	RJW
1,3-Butadiene	ND	5.00	12.5			ND	11	28	1	25	6/18/16 16:55	RJW
1,3-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25	6/18/16 16:55	RJW
1,4-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25	6/18/16 16:55	RJW
1,4-Dioxane	ND	5.00	12.5			ND	18	45	1	25	6/18/16 16:55	RJW
2-Butanone (MEK)	ND	5.00	12.5			ND	15	37	1	25	6/18/16 16:55	RJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5			ND	57	140	1	25	6/18/16 16:55	RJW
Acrolein	ND	5.00	12.5			ND	11	29	1	25	6/18/16 16:55	RJW
Allyl chloride	ND	5.00	12.5			ND	16	39	1	25	6/18/16 16:55	RJW
Benzene	ND	5.00	12.5			ND	16	40	1	25	6/18/16 16:55	RJW
Benzyl Chloride	ND	5.00	12.5			ND	26	65	1	25	6/18/16 16:55	RJW
Bromodichloromethane	ND	5.00	12.5			ND	34	84	1	25	6/18/16 16:55	RJW
Bromform	ND	5.00	12.5			ND	52	130	1	25	6/18/16 16:55	RJW
Bromomethane	ND	5.00	12.5			ND	19	49	1	25	6/18/16 16:55	RJW
Carbon Disulfide	ND	12.5	12.5			ND	39	39	1	25	6/18/16 16:55	RJW
Carbon Tetrachloride	ND	5.00	12.5			ND	31	79	1	25	6/18/16 16:55	RJW
Chlorobenzene	ND	5.00	12.5			ND	23	58	1	25	6/18/16 16:55	RJW
Chloroethane	ND	5.00	12.5			ND	13	33	1	25	6/18/16 16:55	RJW
Chloroform	ND	5.00	12.5			ND	24	61	1	25	6/18/16 16:55	RJW
Chloromethane	ND	5.00	12.5			ND	10	26	1	25	6/18/16 16:55	RJW
cis-1,2-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25	6/18/16 16:55	RJW



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-17 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-17 Canister ID: #16173 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:09 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/18/16 16:55 RJW
Cyclohexane	ND	5.00	12.5		ND	17	43	1	25	6/18/16 16:55 RJW
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/18/16 16:55 RJW
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/18/16 16:55 RJW
Ethylbenzene	ND	5.00	12.5		ND	22	54	1	25	6/18/16 16:55 RJW
Heptane	ND	5.00	12.5		ND	20	51	1	25	6/18/16 16:55 RJW
Hexane	ND	5.00	12.5		ND	18	44	1	25	6/18/16 16:55 RJW
Isopropylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/18/16 16:55 RJW
m+p-Xylenes	ND	10.0	25.0		ND	43	110	1	25	6/18/16 16:55 RJW
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/18/16 16:55 RJW
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/18/16 16:55 RJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/18/16 16:55 RJW
o-Xylene	ND	5.00	12.5		ND	22	54	1	25	6/18/16 16:55 RJW
Propylene	ND	5.00	12.5		ND	8.6	22	1	25	6/18/16 16:55 RJW
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/18/16 16:55 RJW
TBA	ND	12.5	12.5		ND	38	38	1	25	6/18/16 16:55 RJW
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/18/16 16:55 RJW
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/18/16 16:55 RJW
Toluene	ND	5.00	12.5		ND	19	47	1	25	6/18/16 16:55 RJW
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/18/16 16:55 RJW
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/18/16 16:55 RJW
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/18/16 16:55 RJW
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/18/16 16:55 RJW
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/18/16 16:55 RJW
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/18/16 16:55 RJW
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/18/16 16:55 RJW
Xylenes, Total	ND	15.0	37.5		ND	65	160	1	25	6/18/16 16:55 RJW

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	82.8	80-120	6/18/16 16:55



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-18 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-18 Canister ID: #16166 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:11 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/16/16 19:50 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/16/16 19:50 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/16/16 19:50 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/16/16 19:50 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/16/16 19:50 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/16/16 19:50 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/16/16 19:50 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/16/16 19:50 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/16/16 19:50 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/16/16 19:50 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/16/16 19:50 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/16/16 19:50 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/16/16 19:50 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/16/16 19:50 RJJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/16/16 19:50 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/16/16 19:50 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/16/16 19:50 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/16/16 19:50 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/16/16 19:50 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/16/16 19:50 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/16/16 19:50 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/16/16 19:50 RJJW
Benzene	14.5	5.00	12.5		46	16	40	1	25	6/16/16 19:50 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/16/16 19:50 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/16/16 19:50 RJJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/16/16 19:50 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/16/16 19:50 RJJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/16/16 19:50 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/16/16 19:50 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/16/16 19:50 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/16/16 19:50 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/16/16 19:50 RJJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/16/16 19:50 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/16/16 19:50 RJJW



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-18 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-18 Canister ID: #16166 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:11 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ			
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/16/16 19:50 RJJW
Cyclohexane	ND	5.00	12.5		ND	17	43	1	25	6/16/16 19:50 RJJW
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/16/16 19:50 RJJW
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/16/16 19:50 RJJW
Ethylbenzene	ND	5.00	12.5		ND	22	54	1	25	6/16/16 19:50 RJJW
Heptane	ND	5.00	12.5		ND	20	51	1	25	6/16/16 19:50 RJJW
Hexane	ND	5.00	12.5		ND	18	44	1	25	6/16/16 19:50 RJJW
Isopropylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/16/16 19:50 RJJW
m+p-Xylenes	ND	10.0	25.0		ND	43	110	1	25	6/16/16 19:50 RJJW
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/16/16 19:50 RJJW
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/16/16 19:50 RJJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/16/16 19:50 RJJW
o-Xylene	ND	5.00	12.5		ND	22	54	1	25	6/16/16 19:50 RJJW
Propylene	25.0	5.00	12.5		43	8.6	22	1	25	6/16/16 19:50 RJJW
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/16/16 19:50 RJJW
TBA	ND	12.5	12.5		ND	38	38	1	25	6/16/16 19:50 RJJW
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/16/16 19:50 RJJW
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/16/16 19:50 RJJW
Toluene	11.8	5.00	12.5	J	44	19	47	1	25	6/16/16 19:50 RJJW
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/16/16 19:50 RJJW
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/16/16 19:50 RJJW
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/16/16 19:50 RJJW
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/16/16 19:50 RJJW
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/16/16 19:50 RJJW
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/16/16 19:50 RJJW
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/16/16 19:50 RJJW
Xylenes, Total	ND	15.0	37.5		ND	65	160	1	25	6/16/16 19:50 RJJW

Surrogate(s)	% Recovery	% Recovery Limits		
4-Bromofluorobenzene	337 *	S	80-120	6/16/16 19:50



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location:	Sample Description/Location:	Initial Vacuum(in Hg): 30
Field Sample #: VP-19	Sub Description/Location:	Final Vacuum(in Hg):
Sample ID: 16F0127-19	Canister ID: #16170	Receipt Vacuum(in Hg): 2
Sample Matrix: Air	Canister Size: 1.4 L	Flow Controller Type:
Sampled: 6/3/2016 11:14		Flow Controller ID:
Sample Type:		

Analyte	EPA TO-15						Dilution	PF	Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ MDL	LOQ				
1,1,1-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/18/16 17:37 RJJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/18/16 17:37 RJJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5		ND	34	86	1	25	6/18/16 17:37 RJJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5		ND	38	96	1	25	6/18/16 17:37 RJJW
1,1,2-Trichloroethane	ND	5.00	12.5		ND	27	68	1	25	6/18/16 17:37 RJJW
1,1-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/18/16 17:37 RJJW
1,1-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/18/16 17:37 RJJW
1,2,4-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/18/16 17:37 RJJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5		ND	38	96	1	25	6/18/16 17:37 RJJW
1,2-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/18/16 17:37 RJJW
1,2-Dichloroethane	ND	5.00	12.5		ND	20	51	1	25	6/18/16 17:37 RJJW
1,2-Dichloropropane	ND	5.00	12.5		ND	23	58	1	25	6/18/16 17:37 RJJW
1,2-Dichlortetrafluoroethane	ND	5.00	12.5		ND	35	87	1	25	6/18/16 17:37 RJJW
1,3,5-Trimethylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/18/16 17:37 RJJW
1,3-Butadiene	ND	5.00	12.5		ND	11	28	1	25	6/18/16 17:37 RJJW
1,3-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/18/16 17:37 RJJW
1,4-Dichlorobenzene	ND	5.00	12.5		ND	30	75	1	25	6/18/16 17:37 RJJW
1,4-Dioxane	ND	5.00	12.5		ND	18	45	1	25	6/18/16 17:37 RJJW
2-Butanone (MEK)	ND	5.00	12.5		ND	15	37	1	25	6/18/16 17:37 RJJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5		ND	57	140	1	25	6/18/16 17:37 RJJW
Acrolein	ND	5.00	12.5		ND	11	29	1	25	6/18/16 17:37 RJJW
Allyl chloride	ND	5.00	12.5		ND	16	39	1	25	6/18/16 17:37 RJJW
Benzene	456	20.0	50.0		1500	64	160	1	100	6/20/16 14:02 RJJW
Benzyl Chloride	ND	5.00	12.5		ND	26	65	1	25	6/18/16 17:37 RJJW
Bromodichloromethane	ND	5.00	12.5		ND	34	84	1	25	6/18/16 17:37 RJJW
Bromoform	ND	5.00	12.5		ND	52	130	1	25	6/18/16 17:37 RJJW
Bromomethane	ND	5.00	12.5		ND	19	49	1	25	6/18/16 17:37 RJJW
Carbon Disulfide	ND	12.5	12.5		ND	39	39	1	25	6/18/16 17:37 RJJW
Carbon Tetrachloride	ND	5.00	12.5		ND	31	79	1	25	6/18/16 17:37 RJJW
Chlorobenzene	ND	5.00	12.5		ND	23	58	1	25	6/18/16 17:37 RJJW
Chloroethane	ND	5.00	12.5		ND	13	33	1	25	6/18/16 17:37 RJJW
Chloroform	ND	5.00	12.5		ND	24	61	1	25	6/18/16 17:37 RJJW
Chloromethane	ND	5.00	12.5		ND	10	26	1	25	6/18/16 17:37 RJJW
cis-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/18/16 17:37 RJJW



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): 30
Field Sample #: VP-19 Sub Description/Location: Final Vacuum(in Hg):
Sample ID: 16F0127-19 Canister ID: #16170 Receipt Vacuum(in Hg): 2
Sample Matrix: Air Canister Size: 1.4 L Flow Controller Type:
Sampled: 6/3/2016 11:14 Flow Controller ID:
Sample Type:

Analyte	EPA TO-15								Date/Time Analyzed	Analyst
	Results	ppbv MDL	LOQ	Flag/Qual	ug/M³ Results	MDL	LOQ	Dilution	PF	
cis-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/18/16 17:37
Cyclohexane	16.5	5.00	12.5		57	17	43	1	25	6/18/16 17:37
Dichlorodifluoromethane	ND	12.5	12.5		ND	62	62	1	25	6/18/16 17:37
Ethyl acetate	ND	5.00	12.5		ND	18	45	1	25	6/18/16 17:37
Ethylbenzene	43.2	5.00	12.5		190	22	54	1	25	6/18/16 17:37
Heptane	ND	5.00	12.5		ND	20	51	1	25	6/18/16 17:37
Hexane	ND	5.00	12.5		ND	18	44	1	25	6/18/16 17:37
Isopropylbenzene	ND	5.00	12.5		ND	25	61	1	25	6/18/16 17:37
m+p-Xylenes	51.5	10.0	25.0		220	43	110	1	25	6/18/16 17:37
Methyl methacrylate	ND	5.00	12.5		ND	20	51	1	25	6/18/16 17:37
Methylene chloride	ND	12.5	25.0		ND	43	87	1	25	6/18/16 17:37
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5		ND	18	45	1	25	6/18/16 17:37
o-Xylene	15.5	5.00	12.5		67	22	54	1	25	6/18/16 17:37
Propylene	57.2	5.00	12.5		99	8.6	22	1	25	6/18/16 17:37
Styrene	ND	5.00	12.5		ND	21	53	1	25	6/18/16 17:37
TBA	ND	12.5	12.5		ND	38	38	1	25	6/18/16 17:37
Tetrachloroethylene (PCE)	ND	5.00	12.5		ND	34	85	1	25	6/18/16 17:37
Tetrahydrofuran	ND	5.00	12.5		ND	15	37	1	25	6/18/16 17:37
Toluene	192	5.00	12.5		720	19	47	1	25	6/18/16 17:37
trans-1,2-Dichloroethylene	ND	5.00	12.5		ND	20	50	1	25	6/18/16 17:37
trans-1,3-Dichloropropene	ND	5.00	12.5		ND	23	57	1	25	6/18/16 17:37
Trichloroethylene	ND	5.00	12.5		ND	27	67	1	25	6/18/16 17:37
Trichlorofluoromethane	ND	12.5	12.5		ND	70	70	1	25	6/18/16 17:37
Vinyl acetate	ND	5.00	12.5		ND	18	44	1	25	6/18/16 17:37
Vinyl bromide	ND	5.00	12.5		ND	22	55	1	25	6/18/16 17:37
Vinyl chloride	ND	5.00	12.5		ND	13	32	1	25	6/18/16 17:37
Xylenes, Total	67.0	15.0	37.5		290	65	160	1	25	6/18/16 17:37
Surrogate(s)		% Recovery			% Recovery					
4-Bromofluorobenzene		118			80-120					6/18/16 17:37
4-Bromofluorobenzene		92.4			80-120					6/20/16 14:02



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Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS					
16F0127-15RE1	6.40 mL / 400 mL	EPA TO-15	BZF0197	SZF0520	AF60076
16F0127-19RE1	4.00 mL / 400 mL	EPA TO-15	BZF0197	SZF0520	AF60076
16F0127-07	16.0 mL / 400 mL	EPA TO-15	BZF0362	SZF0395	AF60052
16F0127-10	16.0 mL / 400 mL	EPA TO-15	BZF0362	SZF0395	AF60052
16F0127-15	8.00 mL / 400 mL	EPA TO-15	BZF0362	SZF0395	AF60052
16F0127-16	16.0 mL / 400 mL	EPA TO-15	BZF0362	SZF0395	AF60052
16F0127-01	60.0 mL / 400 mL	EPA TO-15	BZF0365	SZF0397	AF60032
16F0127-04	320 mL / 400 mL	EPA TO-15	BZF0365	SZF0397	AF60032
16F0127-05	160 mL / 400 mL	EPA TO-15	BZF0365	SZF0397	AF60032
16F0127-11	80.0 mL / 400 mL	EPA TO-15	BZF0365	SZF0397	AF60032
16F0127-03	16.0 mL / 400 mL	EPA TO-15	BZF0422	SZF0491	AF60052
16F0127-06	16.0 mL / 400 mL	EPA TO-15	BZF0422	SZF0491	AF60052
16F0127-12	16.0 mL / 400 mL	EPA TO-15	BZF0422	SZF0491	AF60052
16F0127-13	4.00 mL / 400 mL	EPA TO-15	BZF0424	SZF0492	AF60052
16F0127-14	4.00 mL / 400 mL	EPA TO-15	BZF0424	SZF0492	AF60052
16F0127-16RE1	1.60 mL / 400 mL	EPA TO-15	BZF0424	SZF0492	AF60052
16F0127-18	16.0 mL / 400 mL	EPA TO-15	BZF0424	SZF0492	AF60052
16F0127-02	16.0 mL / 400 mL	EPA TO-15	BZF0457	SZF0496	AF60076
16F0127-08	16.0 mL / 400 mL	EPA TO-15	BZF0457	SZF0496	AF60076
16F0127-17	16.0 mL / 400 mL	EPA TO-15	BZF0457	SZF0496	AF60076
16F0127-19	16.0 mL / 400 mL	EPA TO-15	BZF0457	SZF0496	AF60076
16F0127-01RE1	3.20 mL / 400 mL	EPA TO-15	BZF0488	SZF0517	AF60080



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Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0197 - No Prep VOC

Blank (BZF0197-BLK1) Prepared & Analyzed: 06/20/2016

1,1,1-Trichloroethane	<0.20 ppbv	0.50	ppbv
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv
1,1,2,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv	0.50	ppbv
1,1,2-Trichloroethane	<0.20 ppbv	0.50	ppbv
1,1-Dichloroethane	<0.20 ppbv	0.50	ppbv
1,1-Dichloroethylene	<0.20 ppbv	0.50	ppbv
1,2,4-Trimethylbenzene	<0.20 ppbv	0.50	ppbv
1,2-Dibromoethane (EDB)	<0.20 ppbv	0.50	ppbv
1,2-Dichlorobenzene	<0.20 ppbv	0.50	ppbv
1,2-Dichloroethane	<0.20 ppbv	0.50	ppbv
1,2-Dichloropropane	<0.20 ppbv	0.50	ppbv
1,2-Dichlorotetrafluoroethane	<0.20 ppbv	0.50	ppbv
1,3,5-Trimethylbenzene	<0.20 ppbv	0.50	ppbv
1,3-Butadiene	<0.20 ppbv	0.50	ppbv
1,3-Dichlorobenzene	<0.20 ppbv	0.50	ppbv
1,4-Dichlorobenzene	<0.20 ppbv	0.50	ppbv
1,4-Dioxane	<0.20 ppbv	0.50	ppbv
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv
Acrolein	<0.20 ppbv	0.50	ppbv
Allyl chloride	<0.20 ppbv	0.50	ppbv
Benzene	<0.20 ppbv	0.50	ppbv
Benzyl Chloride	<0.20 ppbv	0.50	ppbv
Bromodichloromethane	<0.20 ppbv	0.50	ppbv
Bromoform	<0.20 ppbv	0.50	ppbv
Bromomethane	<0.20 ppbv	0.50	ppbv
Carbon Disulfide	<0.50 ppbv	0.50	ppbv
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv
Chlorobenzene	<0.20 ppbv	0.50	ppbv
Chloroethane	<0.20 ppbv	0.50	ppbv
Chloroform	<0.20 ppbv	0.50	ppbv
Chloromethane	<0.20 ppbv	0.50	ppbv
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv



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Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
Batch BZF0197 - No Prep VOC										
Blank (BZF0197-BLK1) Prepared & Analyzed: 06/20/2016										
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv							
o-Xylene	<0.20 ppbv	0.50	ppbv							
Propylene	<0.20 ppbv	0.50	ppbv							
Styrene	<0.20 ppbv	0.50	ppbv							
TBA	<0.50 ppbv	0.50	ppbv							
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv							
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv							
Toluene	<0.20 ppbv	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Trichloroethylene	<0.20 ppbv	0.50	ppbv							
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv							
Vinyl acetate	<0.20 ppbv	0.50	ppbv							
Vinyl bromide	<0.20 ppbv	0.50	ppbv							
Vinyl chloride	<0.20 ppbv	0.50	ppbv							
Xylenes, Total	<0.60 ppbv	1.50	ppbv							
Surr: 4-Bromofluorobenzene	4.42		ppbv	5.00		88.4	80-120			



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Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0197 - No Prep VOC										
LCS (BZF0197-BS1) Prepared & Analyzed: 06/20/2016										
1,1,1-Trichloroethane	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
1,1,2,2-Tetrachloroethane	5.96 ppbv	0.5	ppbv	5.00	ppbv	119	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130			
1,1,2-Trichloroethane	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
1,1-Dichloroethane	5.14 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
1,1-Dichloroethylene	4.84 ppbv	0.5	ppbv	5.00	ppbv	96.8	70-130			
1,2,4-Trimethylbenzene	6.00 ppbv	0.5	ppbv	5.00	ppbv	120	70-130			
1,2-Dibromoethane (EDB)	5.49 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
1,2-Dichlorobenzene	4.73 ppbv	0.5	ppbv	5.00	ppbv	94.6	70-130			
1,2-Dichloroethane	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
1,2-Dichloropropane	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
1,2-Dichlorotetrafluoroethane	5.01 ppbv	0.5	ppbv	5.00	ppbv	100	70-130			
1,3,5-Trimethylbenzene	5.99 ppbv	0.5	ppbv	5.00	ppbv	120	70-130			
1,3-Butadiene	4.59 ppbv	0.5	ppbv	5.00	ppbv	91.8	70-130			
1,3-Dichlorobenzene	4.82 ppbv	0.5	ppbv	5.00	ppbv	96.4	70-130			
1,4-Dichlorobenzene	4.73 ppbv	0.5	ppbv	5.00	ppbv	94.6	70-130			
1,4-Dioxane	6.44 ppbv	0.5	ppbv	5.00	ppbv	129	70-130			
2-Butanone (MEK)	4.95 ppbv	0.5	ppbv	5.00	ppbv	99.0	70-130			
4-Methyl-2-pentanone (MIBK)	5.32 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Allyl chloride	4.59 ppbv	0.5	ppbv	5.00	ppbv	91.8	70-130			
Benzene	5.45 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Benzyl Chloride	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130			
Bromodichloromethane	5.05 ppbv	0.5	ppbv	5.00	ppbv	101	70-130			
Bromoform	5.47 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Bromomethane	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130			
Carbon Disulfide	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130			
Carbon Tetrachloride	5.21 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Chlorobenzene	5.24 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Chloroethane	4.52 ppbv	0.5	ppbv	5.00	ppbv	90.4	70-130			
Chloroform	5.49 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
Chloromethane	5.39 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
cis-1,2-Dichloroethylene	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
cis-1,3-Dichloropropene	5.69 ppbv	0.5	ppbv	5.00	ppbv	114	70-130			
Cyclohexane	5.20 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Dichlorodifluoromethane	5.03 ppbv	0.5	ppbv	5.00	ppbv	101	70-130			
Ethyl acetate	4.19 ppbv	0.5	ppbv	5.00	ppbv	83.8	70-130			
Ethylbenzene	5.90 ppbv	0.5	ppbv	5.00	ppbv	118	70-130			



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Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0197 - No Prep VOC										
LCS (BZF0197-BS1)										
Heptane	5.22 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Hexane	5.24 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Isopropylbenzene	6.07 ppbv	0.50	ppbv		ppbv		70-130			
m+p-Xylenes	11.8 ppbv	1	ppbv	10.0	ppbv	118	70-130			
Methylene chloride	4.72 ppbv	1.00	ppbv		ppbv		70-130			
Methyl-t-butyl ether (MTBE)	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
o-Xylene	6.09 ppbv	0.5	ppbv	5.00	ppbv	122	70-130			
Propylene	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130			
Styrene	6.04 ppbv	0.5	ppbv	5.00	ppbv	121	70-130			
Tetrachloroethylene (PCE)	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
Tetrahydrofuran	6.30 ppbv	0.5	ppbv	5.00	ppbv	126	70-130			
Toluene	5.67 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
trans-1,2-Dichloroethylene	5.04 ppbv	0.5	ppbv	5.00	ppbv	101	70-130			
trans-1,3-Dichloropropene	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
Trichloroethylene	5.64 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
Trichlorofluoromethane	5.22 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Vinyl acetate	4.96 ppbv	0.5	ppbv	5.00	ppbv	99.2	70-130			
Vinyl bromide	4.70 ppbv	0.5	ppbv	5.00	ppbv	94.0	70-130			
Vinyl chloride	5.16 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
Xylenes, Total	17.9 ppbv	1.50	ppbv		ppbv		70-130			
<i>Surr: 4-Bromofluorobenzene</i>	5.22		ppbv	5.00	ppbv	104	70-130			

LCS Dup (BZF0197-BSD1)	Prepared & Analyzed: 06/20/2016								
1,1,1-Trichloroethane	5.61 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	0.895	25
1,1,2,2-Tetrachloroethane	5.99 ppbv	0.5	ppbv	5.00	ppbv	120	70-130	0.502	25
1,1,2-Trichloro-1,2,2-trifluoroethane	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130	1.43	25
1,1,2-Trichloroethane	5.47 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	1.63	25
1,1-Dichloroethane	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	0.775	25
1,1-Dichloroethylene	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130	2.09	25
1,2,4-Trimethylbenzene	6.10 ppbv	0.5	ppbv	5.00	ppbv	122	70-130	1.65	25
1,2-Dibromoethane (EDB)	5.54 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	0.907	25
1,2-Dichlorobenzene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	2.51	25
1,2-Dichloroethane	5.36 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	0.186	25
1,2-Dichloropropane	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	0.00	25
1,2-Dichlorotetrafluoroethane	5.00 ppbv	0.5	ppbv	5.00	ppbv	100	70-130	0.200	25
1,3,5-Trimethylbenzene	6.04 ppbv	0.5	ppbv	5.00	ppbv	121	70-130	0.831	25



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Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0197 - No Prep VOC

LCS Dup (BZF0197-BSD1) Prepared & Analyzed: 06/20/2016

1,3-Butadiene	4.49 ppbv	0.5	ppbv	5.00	ppbv	89.8	70-130	2.20	25	
1,3-Dichlorobenzene	4.88 ppbv	0.5	ppbv	5.00	ppbv	97.6	70-130	1.24	25	
1,4-Dichlorobenzene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	2.51	25	
2-Butanone (MEK)	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	3.18	25	
4-Methyl-2-pentanone (MIBK)	5.25 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	1.32	25	
Allyl chloride	4.66 ppbv	0.5	ppbv	5.00	ppbv	93.2	70-130	1.51	25	
Benzene	5.55 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.82	25	
Benzyl Chloride	5.70 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	1.77	25	
Bromodichloromethane	5.13 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	1.57	25	
Bromoform	5.51 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	0.729	25	
Bromomethane	4.81 ppbv	0.5	ppbv	5.00	ppbv	96.2	70-130	2.06	25	
Carbon Disulfide	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130	4.16	25	
Carbon Tetrachloride	5.35 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	2.65	25	
Chlorobenzene	5.21 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	0.574	25	
Chloroethane	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130	4.12	25	
Chloroform	5.20 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	5.43	25	
Chloromethane	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	1.50	25	
cis-1,2-Dichloroethylene	4.99 ppbv	0.5	ppbv	5.00	ppbv	99.8	70-130	3.74	25	
cis-1,3-Dichloropropene	5.59 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	1.77	25	
Cyclohexane	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	0.966	25	
Dichlorodifluoromethane	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	2.36	25	
Ethyl acetate	3.99 ppbv	0.5	ppbv	5.00	ppbv	79.8	70-130	4.89	25	
Ethylbenzene	5.88 ppbv	0.5	ppbv	5.00	ppbv	118	70-130	0.340	25	
Heptane	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	1.14	25	
Hexane	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	0.191	25	
Isopropylbenzene	6.11 ppbv	0.50	ppbv		ppbv		70-130	0.657	25	
m+p-Xylenes	11.8 ppbv	1	ppbv	10.0	ppbv	118	70-130	0.0849	25	
Methylene chloride	4.70 ppbv	1.00	ppbv		ppbv		70-130	0.425	25	
Methyl-t-butyl ether (MTBE)	4.96 ppbv	0.5	ppbv	5.00	ppbv	99.2	70-130	3.76	25	
o-Xylene	6.03 ppbv	0.5	ppbv	5.00	ppbv	121	70-130	0.990	25	
Propylene	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	0.203	25	
Styrene	6.01 ppbv	0.5	ppbv	5.00	ppbv	120	70-130	0.498	25	
Tetrachloroethylene (PCE)	5.50 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	1.08	25	
Tetrahydrofuran	6.33 ppbv	0.5	ppbv	5.00	ppbv	127	70-130	0.475	25	
Toluene	5.64 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	0.531	25	
trans-1,2-Dichloroethylene	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130	3.64	25	
trans-1,3-Dichloropropene	5.48 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	2.03	25	



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0197 - No Prep VOC

LCS Dup (BZF0197-BSD1) Prepared & Analyzed: 06/20/2016										
Trichloroethylene	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.43	25	
Trichlorofluoromethane	5.07 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	2.92	25	
Vinyl acetate	4.95 ppbv	0.5	ppbv	5.00	ppbv	99.0	70-130	0.202	25	
Vinyl bromide	4.69 ppbv	0.5	ppbv	5.00	ppbv	93.8	70-130	0.213	25	
Vinyl chloride	5.04 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	2.35	25	
Xylenes, Total	17.8 ppbv	1.50	ppbv		ppbv		70-130	0.392	25	
Surr: 4-Bromofluorobenzene	5.29		ppbv	5.00	ppbv	106	70-130			

Batch BZF0362 - No Prep VOC

Blank (BZF0362-BLK1) Prepared & Analyzed: 06/14/2016										
1,1,1-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
1,2,4-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dibromoethane (EDB)	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,2-Dichloropropane	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorotetrafluoroethane	<0.20 ppbv	0.50	ppbv							
1,3,5-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,3-Butadiene	<0.20 ppbv	0.50	ppbv							
1,3-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dioxane	<0.20 ppbv	0.50	ppbv							
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv							
Acrolein	<0.20 ppbv	0.50	ppbv							
Allyl chloride	<0.20 ppbv	0.50	ppbv							
Benzene	<0.20 ppbv	0.50	ppbv							
Benzyl Chloride	<0.20 ppbv	0.50	ppbv							
Bromodichloromethane	<0.20 ppbv	0.50	ppbv							
Bromoform	<0.20 ppbv	0.50	ppbv							



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Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
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Batch BZF0362 - No Prep VOC

Blank (BZF0362-BLK1)	Prepared & Analyzed: 06/14/2016									
Bromomethane	<0.20 ppbv	0.50	ppbv							
Carbon Disulfide	<0.50 ppbv	0.50	ppbv							
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv							
Chlorobenzene	<0.20 ppbv	0.50	ppbv							
Chloroethane	<0.20 ppbv	0.50	ppbv							
Chloroform	<0.20 ppbv	0.50	ppbv							
Chloromethane	<0.20 ppbv	0.50	ppbv							
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv							
o-Xylene	<0.20 ppbv	0.50	ppbv							
Propylene	<0.20 ppbv	0.50	ppbv							
Styrene	<0.20 ppbv	0.50	ppbv							
TBA	<0.50 ppbv	0.50	ppbv							
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv							
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv							
Toluene	<0.20 ppbv	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Trichloroethylene	<0.20 ppbv	0.50	ppbv							
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv							
Vinyl acetate	<0.20 ppbv	0.50	ppbv							
Vinyl bromide	<0.20 ppbv	0.50	ppbv							
Vinyl chloride	<0.20 ppbv	0.50	ppbv							
Xylenes, Total	<0.60 ppbv	1.50	ppbv							

Surr: 4-Bromofluorobenzene 4.22 ppbv 5.00 84.4 80-120



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Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0362 - No Prep VOC

LCS (BZF0362-BS1) Prepared & Analyzed: 06/14/2016

1,1,1-Trichloroethane	5.35 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
1,1,1,2-Tetrachloroethane	0.25 ppbv	0.50	ppbv		ppbv		70-130			
1,1,2,2-Tetrachloroethane	5.73 ppbv	0.5	ppbv	5.00	ppbv	115	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130			
1,1,2-Trichloroethane	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
1,1-Dichloroethane	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130			
1,1-Dichloroethylene	4.77 ppbv	0.5	ppbv	5.00	ppbv	95.4	70-130			
1,2,4-Trimethylbenzene	5.95 ppbv	0.5	ppbv	5.00	ppbv	119	70-130			
1,2-Dibromoethane (EDB)	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
1,2-Dichlorobenzene	4.59 ppbv	0.5	ppbv	5.00	ppbv	91.8	70-130			
1,2-Dichloroethane	5.02 ppbv	0.5	ppbv	5.00	ppbv	100	70-130			
1,2-Dichloropropane	5.17 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
1,2-Dichlorotetrafluoroethane	5.81 ppbv	0.5	ppbv	5.00	ppbv	116	70-130			
1,3,5-Trimethylbenzene	5.73 ppbv	0.5	ppbv	5.00	ppbv	115	70-130			
1,3-Butadiene	4.66 ppbv	0.5	ppbv	5.00	ppbv	93.2	70-130			
1,3-Dichlorobenzene	4.66 ppbv	0.5	ppbv	5.00	ppbv	93.2	70-130			
1,4-Dichlorobenzene	4.59 ppbv	0.5	ppbv	5.00	ppbv	91.8	70-130			
1,4-Dioxane	6.44 ppbv	0.5	ppbv	5.00	ppbv	129	70-130			
2-Butanone (MEK)	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130			
4-Methyl-2-pentanone (MIBK)	5.46 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Acrolein	<0.20 ppbv	0.50	ppbv		ppbv		70-130			
Allyl chloride	4.83 ppbv	0.5	ppbv	5.00	ppbv	96.6	70-130			
Benzene	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Benzyl Chloride	5.16 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
Bromodichloromethane	5.01 ppbv	0.5	ppbv	5.00	ppbv	100	70-130			
Bromoform	5.25 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Bromomethane	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Carbon Disulfide	4.69 ppbv	0.5	ppbv	5.00	ppbv	93.8	70-130			
Carbon Tetrachloride	5.13 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
Chlorobenzene	5.08 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Chloroethane	4.39 ppbv	0.5	ppbv	5.00	ppbv	87.8	70-130			
Chloroform	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Chloromethane	5.63 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
cis-1,2-Dichloroethylene	4.94 ppbv	0.5	ppbv	5.00	ppbv	98.8	70-130			
cis-1,3-Dichloropropene	5.40 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
Cyclohexane	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Dichlorodifluoromethane	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0362 - No Prep VOC

Prepared & Analyzed: 06/14/2016						
Ethyl acetate	4.87 ppbv	0.5	ppbv	5.00	ppbv	97.4 70-130
Ethylbenzene	5.56 ppbv	0.5	ppbv	5.00	ppbv	111 70-130
Heptane	5.05 ppbv	0.5	ppbv	5.00	ppbv	101 70-130
Hexane	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6 70-130
Isopropylbenzene	5.75 ppbv	0.50	ppbv		ppbv	70-130
m+p-Xylenes	11.3 ppbv	1	ppbv	10.0	ppbv	113 70-130
Methyl methacrylate	<0.20 ppbv	0.50	ppbv		ppbv	70-130
Methylene chloride	4.91 ppbv	1.00	ppbv		ppbv	70-130
Methyl-t-butyl ether (MTBE)	4.96 ppbv	0.5	ppbv	5.00	ppbv	99.2 70-130
o-Xylene	5.69 ppbv	0.5	ppbv	5.00	ppbv	114 70-130
Propylene	5.21 ppbv	0.5	ppbv	5.00	ppbv	104 70-130
Styrene	5.96 ppbv	0.5	ppbv	5.00	ppbv	119 70-130
TBA	<0.50 ppbv	0.50	ppbv		ppbv	70-130
Tetrachloroethylene (PCE)	5.17 ppbv	0.5	ppbv	5.00	ppbv	103 70-130
Tetrahydrofuran	5.89 ppbv	0.5	ppbv	5.00	ppbv	118 70-130
Toluene	5.50 ppbv	0.5	ppbv	5.00	ppbv	110 70-130
trans-1,2-Dichloroethylene	4.96 ppbv	0.5	ppbv	5.00	ppbv	99.2 70-130
trans-1,3-Dichloropropene	5.43 ppbv	0.5	ppbv	5.00	ppbv	109 70-130
Trichloroethylene	5.26 ppbv	0.5	ppbv	5.00	ppbv	105 70-130
Trichlorofluoromethane	5.14 ppbv	0.5	ppbv	5.00	ppbv	103 70-130
Vinyl acetate	5.14 ppbv	0.5	ppbv	5.00	ppbv	103 70-130
Vinyl bromide	4.83 ppbv	0.5	ppbv	5.00	ppbv	96.6 70-130
Vinyl chloride	5.83 ppbv	0.5	ppbv	5.00	ppbv	117 70-130
Xylenes, Total	17.0 ppbv	1.50	ppbv		ppbv	70-130
Surr: 4-Bromofluorobenzene	5.16		ppbv	5.00	ppbv	103 70-130

Prepared & Analyzed: 06/14/2016						
1,1,1-Trichloroethane	5.37 ppbv	0.5	ppbv	5.00	ppbv	107 70-130 0.373 25
1,1,1,2-Tetrachloroethane	0.24 ppbv	0.50	ppbv		ppbv	70-130 4.08 25
1,1,2,2-Tetrachloroethane	5.64 ppbv	0.5	ppbv	5.00	ppbv	113 70-130 1.58 25
1,1,2-Trichloro-1,2,2-trifluoroethane	4.70 ppbv	0.5	ppbv	5.00	ppbv	94.0 70-130 0.425 25
1,1,2-Trichloroethane	5.37 ppbv	0.5	ppbv	5.00	ppbv	107 70-130 1.12 25
1,1-Dichloroethane	4.90 ppbv	0.5	ppbv	5.00	ppbv	98.0 70-130 0.610 25
1,1-Dichloroethylene	4.76 ppbv	0.5	ppbv	5.00	ppbv	95.2 70-130 0.210 25
1,2,4-Trimethylbenzene	6.00 ppbv	0.5	ppbv	5.00	ppbv	120 70-130 0.837 25
1,2-Dibromoethane (EDB)	5.27 ppbv	0.5	ppbv	5.00	ppbv	105 70-130 1.88 25



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Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0362 - No Prep VOC

LCS Dup (BZF0362-BSD1) Prepared & Analyzed: 06/14/2016

1,2-Dichlorobenzene	4.67 ppbv	0.5	ppbv	5.00	ppbv	93.4	70-130	1.73	25
1,2-Dichloroethane	4.99 ppbv	0.5	ppbv	5.00	ppbv	99.8	70-130	0.599	25
1,2-Dichloropropane	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	0.193	25
1,2-Dichlorotetrafluoroethane	5.40 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	7.31	25
1,3,5-Trimethylbenzene	5.69 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	0.701	25
1,3-Butadiene	4.50 ppbv	0.5	ppbv	5.00	ppbv	90.0	70-130	3.49	25
1,3-Dichlorobenzene	4.73 ppbv	0.5	ppbv	5.00	ppbv	94.6	70-130	1.49	25
1,4-Dichlorobenzene	4.67 ppbv	0.5	ppbv	5.00	ppbv	93.4	70-130	1.73	25
1,4-Dioxane	6.30 ppbv	0.5	ppbv	5.00	ppbv	126	70-130	2.20	25
2-Butanone (MEK)	4.99 ppbv	0.5	ppbv	5.00	ppbv	99.8	70-130	2.64	25
4-Methyl-2-pentanone (MIBK)	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	1.66	25
Acrolein	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25
Allyl chloride	4.54 ppbv	0.5	ppbv	5.00	ppbv	90.8	70-130	6.19	25
Benzene	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	3.66	25
Benzyl Chloride	5.25 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	1.73	25
Bromodichloromethane	4.95 ppbv	0.5	ppbv	5.00	ppbv	99.0	70-130	1.20	25
Bromoform	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	2.70	25
Bromomethane	5.06 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	2.34	25
Carbon Disulfide	4.57 ppbv	0.5	ppbv	5.00	ppbv	91.4	70-130	2.59	25
Carbon Tetrachloride	5.04 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	1.77	25
Chlorobenzene	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130	3.00	25
Chloroethane	4.41 ppbv	0.5	ppbv	5.00	ppbv	88.2	70-130	0.455	25
Chloroform	5.08 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	2.91	25
Chloromethane	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	6.42	25
cis-1,2-Dichloroethylene	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130	0.203	25
cis-1,3-Dichloropropene	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	2.25	25
Cyclohexane	4.99 ppbv	0.5	ppbv	5.00	ppbv	99.8	70-130	1.98	25
Dichlorodifluoromethane	5.13 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	8.04	25
Ethyl acetate	4.43 ppbv	0.5	ppbv	5.00	ppbv	88.6	70-130	9.46	25
Ethylbenzene	5.46 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	1.81	25
Heptane	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130	2.61	25
Hexane	5.03 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	0.999	25
Isopropylbenzene	5.82 ppbv	0.50	ppbv		ppbv		70-130	1.21	25
m+p-Xylenes	11.1 ppbv	1	ppbv	10.0	ppbv	111	70-130	2.41	25
Methyl methacrylate	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25
Methylene chloride	4.72 ppbv	1.00	ppbv		ppbv		70-130	3.95	25
Methyl-t-butyl ether (MTBE)	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	2.24	25



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0362 - No Prep VOC										
LCS Dup (BZF0362-BSD1)										
o-Xylene	5.64 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	0.883	25	
Propylene	4.69 ppbv	0.5	ppbv	5.00	ppbv	93.8	70-130	10.5	25	
Styrene	5.95 ppbv	0.5	ppbv	5.00	ppbv	119	70-130	0.168	25	
TBA	<0.50 ppbv	0.50	ppbv		ppbv		70-130		25	
Tetrachloroethylene (PCE)	5.12 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.972	25	
Tetrahydrofuran	5.81 ppbv	0.5	ppbv	5.00	ppbv	116	70-130	1.37	25	
Toluene	5.46 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	0.730	25	
trans-1,2-Dichloroethylene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	2.24	25	
trans-1,3-Dichloropropene	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	0.00	25	
Trichloroethylene	5.20 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	1.15	25	
Trichlorofluoromethane	5.03 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	2.16	25	
Vinyl acetate	5.04 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	1.96	25	
Vinyl bromide	4.77 ppbv	0.5	ppbv	5.00	ppbv	95.4	70-130	1.25	25	
Vinyl chloride	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	7.10	25	
Xylenes, Total	16.7 ppbv	1.50	ppbv		ppbv		70-130	1.90	25	
Surr: 4-Bromofluorobenzene	5.14		ppbv	5.00	ppbv	103	70-130			

Batch BZF0365 - No Prep VOC

Blank (BZF0365-BLK1)	Prepared & Analyzed: 06/14/2016
1,1,1-Trichloroethane	<0.20 ppbv
1,1,1,2-Tetrachloroethane	<0.20 ppbv
1,1,2,2-Tetrachloroethane	<0.20 ppbv
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv
1,1,2-Trichloroethane	<0.20 ppbv
1,1-Dichloroethane	<0.20 ppbv
1,1-Dichloroethylene	<0.20 ppbv
1,2,4-Trimethylbenzene	<0.20 ppbv
1,2-Dibromoethane (EDB)	<0.20 ppbv
1,2-Dichlorobenzene	<0.20 ppbv
1,2-Dichloroethane	<0.20 ppbv
1,2-Dichloropropane	<0.20 ppbv
1,2-Dichlorotetrafluoroethane	<0.20 ppbv
1,3,5-Trimethylbenzene	<0.20 ppbv
1,3-Butadiene	<0.20 ppbv
1,3-Dichlorobenzene	<0.20 ppbv
1,4-Dichlorobenzene	<0.20 ppbv



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Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
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Batch BZF0365 - No Prep VOC

Blank (BZF0365-BLK1) Prepared & Analyzed: 06/14/2016

1,4-Dioxane	<0.20 ppbv	0.50	ppbv							
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv							
Acrolein	<0.20 ppbv	0.50	ppbv							
Allyl chloride	<0.20 ppbv	0.50	ppbv							
Benzene	<0.20 ppbv	0.50	ppbv							
Benzyl Chloride	<0.20 ppbv	0.50	ppbv							
Bromodichloromethane	<0.20 ppbv	0.50	ppbv							
Bromoform	<0.20 ppbv	0.50	ppbv							
Bromomethane	<0.20 ppbv	0.50	ppbv							
Carbon Disulfide	<0.50 ppbv	0.50	ppbv							
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv							
Chlorobenzene	<0.20 ppbv	0.50	ppbv							
Chloroethane	<0.20 ppbv	0.50	ppbv							
Chloroform	<0.20 ppbv	0.50	ppbv							
Chloromethane	<0.20 ppbv	0.50	ppbv							
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv							
o-Xylene	<0.20 ppbv	0.50	ppbv							
Propylene	<0.20 ppbv	0.50	ppbv							
Styrene	<0.20 ppbv	0.50	ppbv							
TBA	<0.50 ppbv	0.50	ppbv							
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv							
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv							
Toluene	<0.20 ppbv	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							



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Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0365 - No Prep VOC										
Blank (BZF0365-BLK1) Prepared & Analyzed: 06/14/2016										
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Trichloroethylene	<0.20 ppbv	0.50	ppbv							
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv							
Vinyl acetate	<0.20 ppbv	0.50	ppbv							
Vinyl bromide	<0.20 ppbv	0.50	ppbv							
Vinyl chloride	<0.20 ppbv	0.50	ppbv							
Xylenes, Total	<0.60 ppbv	1.50	ppbv							
Surr: 4-Bromofluorobenzene	4.65		ppbv	5.00		93.0	80-120			
LCS (BZF0365-BS1) Prepared & Analyzed: 06/14/2016										
1,1,1-Trichloroethane	5.38 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
1,1,1,2-Tetrachloroethane	0.34 ppbv	0.50	ppbv		ppbv		70-130			
1,1,2,2-Tetrachloroethane	5.46 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130			
1,1,2-Trichloroethane	5.39 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
1,1-Dichloroethane	5.64 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
1,1-Dichloroethylene	5.00 ppbv	0.5	ppbv	5.00	ppbv	100	70-130			
1,2,4-Trimethylbenzene	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
1,2-Dibromoethane (EDB)	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
1,2-Dichlorobenzene	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
1,2-Dichloroethane	5.22 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
1,2-Dichloropropane	5.45 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
1,2-Dichlorotetrafluoroethane	5.52 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
1,3,5-Trimethylbenzene	5.26 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
1,3-Butadiene	4.64 ppbv	0.5	ppbv	5.00	ppbv	92.8	70-130			
1,3-Dichlorobenzene	4.90 ppbv	0.5	ppbv	5.00	ppbv	98.0	70-130			
1,4-Dichlorobenzene	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130			
1,4-Dioxane	4.05 ppbv	0.5	ppbv	5.00	ppbv	81.0	70-130			
2-Butanone (MEK)	4.83 ppbv	0.5	ppbv	5.00	ppbv	96.6	70-130			
4-Methyl-2-pentanone (MIBK)	4.80 ppbv	0.5	ppbv	5.00	ppbv	96.0	70-130			
Acrolein	0.30 ppbv	0.50	ppbv		ppbv		70-130			
Allyl chloride	4.54 ppbv	0.5	ppbv	5.00	ppbv	90.8	70-130			
Benzene	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Benzyl Chloride	4.75 ppbv	0.5	ppbv	5.00	ppbv	95.0	70-130			
Bromodichloromethane	4.80 ppbv	0.5	ppbv	5.00	ppbv	96.0	70-130			
Bromoform	4.40 ppbv	0.5	ppbv	5.00	ppbv	88.0	70-130			



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0365 - No Prep VOC										
LCS (BZF0365-BS1)						Prepared & Analyzed: 06/14/2016				
Bromomethane	5.70 ppbv	0.5	ppbv	5.00	ppbv	114	70-130			
Carbon Disulfide	5.02 ppbv	0.5	ppbv	5.00	ppbv	100	70-130			
Carbon Tetrachloride	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130			
Chlorobenzene	4.75 ppbv	0.5	ppbv	5.00	ppbv	95.0	70-130			
Chloroethane	5.53 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
Chloroform	5.45 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Chloromethane	6.47 ppbv	0.5	ppbv	5.00	ppbv	129	70-130			
cis-1,2-Dichloroethylene	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
cis-1,3-Dichloropropene	4.95 ppbv	0.5	ppbv	5.00	ppbv	99.0	70-130			
Cyclohexane	4.64 ppbv	0.5	ppbv	5.00	ppbv	92.8	70-130			
Dichlorodifluoromethane	6.01 ppbv	0.5	ppbv	5.00	ppbv	120	70-130			
Ethyl acetate	4.13 ppbv	0.5	ppbv	5.00	ppbv	82.6	70-130			
Ethylbenzene	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Heptane	4.42 ppbv	0.5	ppbv	5.00	ppbv	88.4	70-130			
Hexane	4.70 ppbv	0.5	ppbv	5.00	ppbv	94.0	70-130			
Isopropylbenzene	5.49 ppbv	0.50	ppbv		ppbv		70-130			
m+p-Xylenes	9.86 ppbv	1	ppbv	10.0	ppbv	98.6	70-130			
Methyl methacrylate	0.23 ppbv	0.50	ppbv		ppbv		70-130			
Methylene chloride	5.01 ppbv	1.00	ppbv		ppbv		70-130			
Methyl-t-butyl ether (MTBE)	5.33 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
o-Xylene	4.94 ppbv	0.5	ppbv	5.00	ppbv	98.8	70-130			
Propylene	6.04 ppbv	0.5	ppbv	5.00	ppbv	121	70-130			
Styrene	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
TBA	<0.50 ppbv	0.50	ppbv		ppbv		70-130			
Tetrachloroethylene (PCE)	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130			
Tetrahydrofuran	6.46 ppbv	0.5	ppbv	5.00	ppbv	129	70-130			
Toluene	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
trans-1,2-Dichloroethylene	4.79 ppbv	0.5	ppbv	5.00	ppbv	95.8	70-130			
trans-1,3-Dichloropropene	4.36 ppbv	0.5	ppbv	5.00	ppbv	87.2	70-130			
Trichloroethylene	4.68 ppbv	0.5	ppbv	5.00	ppbv	93.6	70-130			
Trichlorofluoromethane	5.58 ppbv	0.5	ppbv	5.00	ppbv	112	70-130			
Vinyl acetate	3.01 ppbv	0.5	ppbv	5.00	ppbv	60.2	70-130			
Vinyl bromide	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130			
Vinyl chloride	5.62 ppbv	0.5	ppbv	5.00	ppbv	112	70-130			
Xylenes, Total	14.8 ppbv	1.50	ppbv		ppbv		70-130			
<i>Surr: 4-Bromofluorobenzene</i>	4.95		ppbv	5.00	ppbv	99.0	70-130			L



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Certificate of Analysis

Final Report

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Submitted To: Joe France Date Issued: June 21, 2016 12:05
Client Site I.D.: Fulton Gasworks - Air Project Number: 36156.006
Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting		Spike	Source	%REC		RPD	Limit	Qual
	Result	Limit	Units	Level	Result	%REC	Limits		

Batch BZF0365 - No Prep VOC

LCS Dup (BZF0365-BSD1)	Prepared & Analyzed: 06/14/2016								
1,1,1-Trichloroethane	5.39 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	0.186	25
1,1,1,2-Tetrachloroethane	0.34 ppbv	0.50	ppbv		ppbv		70-130	0.00	25
1,1,2,2-Tetrachloroethane	5.51 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	0.912	25
1,1,2-Trichloro-1,2,2-trifluoroethane	5.02 ppbv	0.5	ppbv	5.00	ppbv	100	70-130	2.01	25
1,1,2-Trichloroethane	5.52 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	2.38	25
1,1-Dichloroethane	5.53 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.97	25
1,1-Dichloroethylene	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130	1.41	25
1,2,4-Trimethylbenzene	5.47 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	1.85	25
1,2-Dibromoethane (EDB)	5.08 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.197	25
1,2-Dichlorobenzene	5.26 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	0.572	25
1,2-Dichloroethane	5.29 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	1.33	25
1,2-Dichloropropane	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	2.71	25
1,2-Dichlorotetrafluoroethane	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	1.44	25
1,3,5-Trimethylbenzene	5.35 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	1.70	25
1,3-Butadiene	4.77 ppbv	0.5	ppbv	5.00	ppbv	95.4	70-130	2.76	25
1,3-Dichlorobenzene	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130	1.62	25
1,4-Dichlorobenzene	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130	0.00	25
1,4-Dioxane	4.65 ppbv	0.5	ppbv	5.00	ppbv	93.0	70-130	13.8	25
2-Butanone (MEK)	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130	0.619	25
4-Methyl-2-pentanone (MIBK)	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130	0.418	25
Acrolein	0.32 ppbv	0.50	ppbv		ppbv		70-130	6.45	25
Allyl chloride	4.56 ppbv	0.5	ppbv	5.00	ppbv	91.2	70-130	0.440	25
Benzene	5.32 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	1.71	25
Benzyl Chloride	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	3.31	25
Bromodichloromethane	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	2.27	25
Bromoform	4.38 ppbv	0.5	ppbv	5.00	ppbv	87.6	70-130	0.456	25
Bromomethane	5.76 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	1.05	25
Carbon Disulfide	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130	0.800	25
Carbon Tetrachloride	5.01 ppbv	0.5	ppbv	5.00	ppbv	100	70-130	2.02	25
Chlorobenzene	4.66 ppbv	0.5	ppbv	5.00	ppbv	93.2	70-130	1.91	25
Chloroethane	5.48 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	0.908	25
Chloroform	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	0.368	25
Chloromethane	6.45 ppbv	0.5	ppbv	5.00	ppbv	129	70-130	0.310	25
cis-1,2-Dichloroethylene	4.90 ppbv	0.5	ppbv	5.00	ppbv	98.0	70-130	3.80	25
cis-1,3-Dichloropropene	4.95 ppbv	0.5	ppbv	5.00	ppbv	99.0	70-130	0.00	25
Cyclohexane	4.84 ppbv	0.5	ppbv	5.00	ppbv	96.8	70-130	4.22	25
Dichlorodifluoromethane	6.16 ppbv	0.5	ppbv	5.00	ppbv	123	70-130	2.47	25



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Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0365 - No Prep VOC										
LCS Dup (BZF0365-BSD1)										
Ethyl acetate	4.49 ppbv	0.5	ppbv	5.00	ppbv	89.8	70-130	8.35	25	
Ethylbenzene	5.12 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.195	25	
Heptane	4.25 ppbv	0.5	ppbv	5.00	ppbv	85.0	70-130	3.92	25	
Hexane	4.56 ppbv	0.5	ppbv	5.00	ppbv	91.2	70-130	3.02	25	
Isopropylbenzene	5.52 ppbv	0.50	ppbv		ppbv		70-130	0.545	25	
m+p-Xylenes	9.83 ppbv	1	ppbv	10.0	ppbv	98.3	70-130	0.305	25	
Methyl methacrylate	0.22 ppbv	0.50	ppbv		ppbv		70-130	4.44	25	
Methylene chloride	5.16 ppbv	1.00	ppbv		ppbv		70-130	2.95	25	
Methyl-t-butyl ether (MTBE)	5.36 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	0.561	25	
o-Xylene	4.99 ppbv	0.5	ppbv	5.00	ppbv	99.8	70-130	1.01	25	
Propylene	6.15 ppbv	0.5	ppbv	5.00	ppbv	123	70-130	1.80	25	
Styrene	5.08 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.197	25	
TBA	<0.50 ppbv	0.50	ppbv		ppbv		70-130		25	
Tetrachloroethylene (PCE)	4.68 ppbv	0.5	ppbv	5.00	ppbv	93.6	70-130	3.77	25	
Tetrahydrofuran	6.73 ppbv	0.5	ppbv	5.00	ppbv	135	70-130	4.09	25	L
Toluene	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	0.00	25	
trans-1,2-Dichloroethylene	4.73 ppbv	0.5	ppbv	5.00	ppbv	94.6	70-130	1.26	25	
trans-1,3-Dichloropropene	4.29 ppbv	0.5	ppbv	5.00	ppbv	85.8	70-130	1.62	25	
Trichloroethylene	4.60 ppbv	0.5	ppbv	5.00	ppbv	92.0	70-130	1.72	25	
Trichlorofluoromethane	5.62 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	0.714	25	
Vinyl acetate	3.00 ppbv	0.5	ppbv	5.00	ppbv	60.0	70-130	0.333	25	L
Vinyl bromide	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130	0.203	25	
Vinyl chloride	5.67 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	0.886	25	
Xylenes, Total	14.8 ppbv	1.50	ppbv		ppbv		70-130	0.135	25	
<i>Surr: 4-Bromofluorobenzene</i>	4.97		ppbv	5.00	ppbv	99.4	70-130			

Batch BZF0422 - No Prep VOC

Blank (BZF0422-BLK1)	Prepared & Analyzed: 06/15/2016						
1,1,1-Trichloroethane	<0.20 ppbv	0.50	ppbv				
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv				
1,1,2,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv				
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv	0.50	ppbv				
1,1,2-Trichloroethane	<0.20 ppbv	0.50	ppbv				
1,1-Dichloroethane	<0.20 ppbv	0.50	ppbv				
1,1-Dichloroethylene	<0.20 ppbv	0.50	ppbv				
1,2,4-Trimethylbenzene	<0.20 ppbv	0.50	ppbv				



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
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Batch BZF0422 - No Prep VOC

Blank (BZF0422-BLK1)	Prepared & Analyzed: 06/15/2016									
Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
1,2-Dibromoethane (EDB)	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,2-Dichloropropane	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorotetrafluoroethane	<0.20 ppbv	0.50	ppbv							
1,3,5-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,3-Butadiene	<0.20 ppbv	0.50	ppbv							
1,3-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dioxane	<0.20 ppbv	0.50	ppbv							
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv							
Acrolein	<0.20 ppbv	0.50	ppbv							
Allyl chloride	<0.20 ppbv	0.50	ppbv							
Benzene	<0.20 ppbv	0.50	ppbv							
Benzyl Chloride	<0.20 ppbv	0.50	ppbv							
Bromodichloromethane	<0.20 ppbv	0.50	ppbv							
Bromoform	<0.20 ppbv	0.50	ppbv							
Bromomethane	<0.20 ppbv	0.50	ppbv							
Carbon Disulfide	<0.50 ppbv	0.50	ppbv							
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv							
Chlorobenzene	<0.20 ppbv	0.50	ppbv							
Chloroethane	<0.20 ppbv	0.50	ppbv							
Chloroform	<0.20 ppbv	0.50	ppbv							
Chloromethane	<0.20 ppbv	0.50	ppbv							
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							



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Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0422 - No Prep VOC

Blank (BZF0422-BLK1)				Prepared & Analyzed: 06/15/2016					
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv						
o-Xylene	<0.20 ppbv	0.50	ppbv						
Propylene	<0.20 ppbv	0.50	ppbv						
Styrene	<0.20 ppbv	0.50	ppbv						
TBA	<0.50 ppbv	0.50	ppbv						
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv						
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv						
Toluene	<0.20 ppbv	0.50	ppbv						
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv						
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv						
Trichloroethylene	<0.20 ppbv	0.50	ppbv						
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv						
Vinyl acetate	<0.20 ppbv	0.50	ppbv						
Vinyl bromide	<0.20 ppbv	0.50	ppbv						
Vinyl chloride	<0.20 ppbv	0.50	ppbv						
Xylenes, Total	<0.60 ppbv	1.50	ppbv						
Surr: 4-Bromofluorobenzene	4.21		ppbv	5.00		84.2	80-120		

LCS (BZF0422-BS1)				Prepared & Analyzed: 06/15/2016				
1,1,1-Trichloroethane	5.66 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	
1,1,1,2-Tetrachloroethane	0.26 ppbv	0.50	ppbv		ppbv		70-130	
1,1,2,2-Tetrachloroethane	5.73 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.94 ppbv	0.5	ppbv	5.00	ppbv	98.8	70-130	
1,1,2-Trichloroethane	5.64 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	
1,1-Dichloroethane	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	
1,1-Dichloroethylene	4.90 ppbv	0.5	ppbv	5.00	ppbv	98.0	70-130	
1,2,4-Trimethylbenzene	5.99 ppbv	0.5	ppbv	5.00	ppbv	120	70-130	
1,2-Dibromoethane (EDB)	5.49 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	
1,2-Dichlorobenzene	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130	
1,2-Dichloroethane	5.39 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	
1,2-Dichloropropane	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	
1,2-Dichlorotetrafluoroethane	6.13 ppbv	0.5	ppbv	5.00	ppbv	123	70-130	
1,3,5-Trimethylbenzene	5.70 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	
1,3-Butadiene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	
1,3-Dichlorobenzene	4.75 ppbv	0.5	ppbv	5.00	ppbv	95.0	70-130	
1,4-Dichlorobenzene	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130	



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Final Report

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0422 - No Prep VOC										
LCS (BZF0422-BS1)						Prepared & Analyzed: 06/15/2016				
1,4-Dioxane	6.84 ppbv	0.5	ppbv	5.00	ppbv	137	70-130			L
2-Butanone (MEK)	5.24 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
4-Methyl-2-pentanone (MIBK)	5.65 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
Allyl chloride	4.81 ppbv	0.5	ppbv	5.00	ppbv	96.2	70-130			
Benzene	5.51 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
Benzyl Chloride	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Bromodichloromethane	5.29 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Bromoform	5.32 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Bromomethane	5.40 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
Carbon Disulfide	4.90 ppbv	0.5	ppbv	5.00	ppbv	98.0	70-130			
Carbon Tetrachloride	5.44 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Chlorobenzene	5.13 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
Chloroethane	4.35 ppbv	0.5	ppbv	5.00	ppbv	87.0	70-130			
Chloroform	5.39 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
Chloromethane	5.74 ppbv	0.5	ppbv	5.00	ppbv	115	70-130			
cis-1,2-Dichloroethylene	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
cis-1,3-Dichloropropene	5.66 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
Cyclohexane	5.26 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Dichlorodifluoromethane	5.65 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
Ethyl acetate	4.89 ppbv	0.5	ppbv	5.00	ppbv	97.8	70-130			
Ethylbenzene	5.53 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
Heptane	5.25 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Hexane	5.24 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Isopropylbenzene	5.92 ppbv	0.50	ppbv		ppbv		70-130			
m+p-Xylenes	11.2 ppbv	1	ppbv	10.0	ppbv	112	70-130			
Methylene chloride	4.89 ppbv	1.00	ppbv		ppbv		70-130			
Methyl-t-butyl ether (MTBE)	5.10 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
o-Xylene	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130			
Propylene	5.20 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Styrene	6.06 ppbv	0.5	ppbv	5.00	ppbv	121	70-130			
Tetrachloroethylene (PCE)	5.24 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Tetrahydrofuran	6.23 ppbv	0.5	ppbv	5.00	ppbv	125	70-130			
Toluene	5.75 ppbv	0.5	ppbv	5.00	ppbv	115	70-130			
trans-1,2-Dichloroethylene	5.13 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
trans-1,3-Dichloropropene	5.84 ppbv	0.5	ppbv	5.00	ppbv	117	70-130			
Trichloroethylene	5.52 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
Trichlorofluoromethane	5.35 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			



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Certificate of Analysis

Final Report

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0422 - No Prep VOC

LCS (BZF0422-BS1)								Prepared & Analyzed: 06/15/2016		
Vinyl acetate	5.33 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
Vinyl bromide	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Vinyl chloride	6.12 ppbv	0.5	ppbv	5.00	ppbv	122	70-130			
Xylenes, Total	16.8 ppbv	1.50	ppbv		ppbv		70-130			
Surr: 4-Bromofluorobenzene	4.89		ppbv	5.00	ppbv	97.8	70-130			

LCS Dup (BZF0422-BSD1)								Prepared & Analyzed: 06/15/2016		
1,1,1-Trichloroethane	5.59 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	1.24	25	
1,1,1,2-Tetrachloroethane	0.27 ppbv	0.50	ppbv		ppbv		70-130	3.77	25	
1,1,2,2-Tetrachloroethane	5.94 ppbv	0.5	ppbv	5.00	ppbv	119	70-130	3.60	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.95 ppbv	0.5	ppbv	5.00	ppbv	99.0	70-130	0.202	25	
1,1,2-Trichloroethane	5.53 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.97	25	
1,1-Dichloroethane	5.19 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	0.193	25	
1,1-Dichloroethylene	4.88 ppbv	0.5	ppbv	5.00	ppbv	97.6	70-130	0.409	25	
1,2,4-Trimethylbenzene	6.50 ppbv	0.5	ppbv	5.00	ppbv	130	70-130	8.17	25	
1,2-Dibromoethane (EDB)	6.05 ppbv	0.5	ppbv	5.00	ppbv	121	70-130	9.71	25	
1,2-Dichlorobenzene	5.20 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	9.89	25	
1,2-Dichloroethane	5.26 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	2.44	25	
1,2-Dichloropropane	5.50 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	1.80	25	
1,2-Dichlorotetrafluoroethane	5.74 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	6.57	25	
1,3,5-Trimethylbenzene	6.18 ppbv	0.5	ppbv	5.00	ppbv	124	70-130	8.08	25	
1,3-Butadiene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	0.00	25	
1,3-Dichlorobenzene	5.12 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	7.50	25	
1,4-Dichlorobenzene	5.20 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	9.89	25	
1,4-Dioxane	6.63 ppbv	0.5	ppbv	5.00	ppbv	133	70-130	3.12	25	L
2-Butanone (MEK)	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	1.73	25	
4-Methyl-2-pentanone (MIBK)	5.61 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	0.710	25	
Allyl chloride	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	2.06	25	
Benzene	5.44 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	1.28	25	
Benzyl Chloride	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	6.83	25	
Bromodichloromethane	5.25 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	0.759	25	
Bromoform	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	0.755	25	
Bromomethane	5.36 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	0.743	25	
Carbon Disulfide	4.80 ppbv	0.5	ppbv	5.00	ppbv	96.0	70-130	2.06	25	
Carbon Tetrachloride	5.41 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	0.553	25	
Chlorobenzene	5.19 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	1.16	25	



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Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0422 - No Prep VOC										
LCS Dup (BZF0422-BSD1)						Prepared & Analyzed: 06/15/2016				
Chloroethane	4.81 ppbv	0.5	ppbv	5.00	ppbv	96.2	70-130	10.0	25	
Chloroform	5.41 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	0.370	25	
Chloromethane	5.70 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	0.699	25	
cis-1,2-Dichloroethylene	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	1.17	25	
cis-1,3-Dichloropropene	5.68 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	0.353	25	
Cyclohexane	5.28 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	0.380	25	
Dichlorodifluoromethane	5.38 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	4.90	25	
Ethyl acetate	5.22 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	6.53	25	
Ethylbenzene	5.66 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	2.32	25	
Heptane	5.38 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	2.45	25	
Hexane	5.41 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	3.19	25	
Isopropylbenzene	6.09 ppbv	0.50	ppbv		ppbv		70-130	2.83	25	
m+p-Xylenes	11.9 ppbv	1	ppbv	10.0	ppbv	119	70-130	5.37	25	
Methylene chloride	4.96 ppbv	1.00	ppbv		ppbv		70-130	1.42	25	
Methyl-t-butyl ether (MTBE)	5.07 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	0.590	25	
o-Xylene	6.03 ppbv	0.5	ppbv	5.00	ppbv	121	70-130	7.39	25	
Propylene	5.06 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	2.73	25	
Styrene	6.19 ppbv	0.5	ppbv	5.00	ppbv	124	70-130	2.12	25	
Tetrachloroethylene (PCE)	5.52 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	5.20	25	
Tetrahydrofuran	6.21 ppbv	0.5	ppbv	5.00	ppbv	124	70-130	0.322	25	
Toluene	5.89 ppbv	0.5	ppbv	5.00	ppbv	118	70-130	2.41	25	
trans-1,2-Dichloroethylene	5.07 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	1.18	25	
trans-1,3-Dichloropropene	5.75 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	1.55	25	
Trichloroethylene	5.49 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	0.545	25	
Trichlorofluoromethane	5.30 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	0.939	25	
Vinyl acetate	5.32 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	0.188	25	
Vinyl bromide	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130	4.62	25	
Vinyl chloride	5.73 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	6.58	25	
Xylenes, Total	17.9 ppbv	1.50	ppbv		ppbv		70-130	6.05	25	
Surr: 4-Bromofluorobenzene	5.14		ppbv	5.00	ppbv	103	70-130			



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
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Batch BZF0424 - No Prep VOC

Blank (BZF0424-BLK1)	Prepared & Analyzed: 06/16/2016									
1,1,1-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
1,2,4-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dibromoethane (EDB)	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,2-Dichloropropane	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorotetrafluoroethane	<0.20 ppbv	0.50	ppbv							
1,3,5-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,3-Butadiene	<0.20 ppbv	0.50	ppbv							
1,3-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dioxane	<0.20 ppbv	0.50	ppbv							
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv							
Acrolein	<0.20 ppbv	0.50	ppbv							
Allyl chloride	<0.20 ppbv	0.50	ppbv							
Benzene	<0.20 ppbv	0.50	ppbv							
Benzyl Chloride	<0.20 ppbv	0.50	ppbv							
Bromodichloromethane	<0.20 ppbv	0.50	ppbv							
Bromoform	<0.20 ppbv	0.50	ppbv							
Bromomethane	<0.20 ppbv	0.50	ppbv							
Carbon Disulfide	<0.50 ppbv	0.50	ppbv							
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv							
Chlorobenzene	<0.20 ppbv	0.50	ppbv							
Chloroethane	<0.20 ppbv	0.50	ppbv							
Chloroform	<0.20 ppbv	0.50	ppbv							
Chloromethane	<0.20 ppbv	0.50	ppbv							
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							



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Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0424 - No Prep VOC										
Blank (BZF0424-BLK1) Prepared & Analyzed: 06/16/2016										
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv							
o-Xylene	<0.20 ppbv	0.50	ppbv							
Propylene	<0.20 ppbv	0.50	ppbv							
Styrene	<0.20 ppbv	0.50	ppbv							
TBA	<0.50 ppbv	0.50	ppbv							
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv							
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv							
Toluene	<0.20 ppbv	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Trichloroethylene	<0.20 ppbv	0.50	ppbv							
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv							
Vinyl acetate	<0.20 ppbv	0.50	ppbv							
Vinyl bromide	<0.20 ppbv	0.50	ppbv							
Vinyl chloride	<0.20 ppbv	0.50	ppbv							
Xylenes, Total	<0.60 ppbv	1.50	ppbv							
<i>Surr: 4-Bromofluorobenzene</i>	4.16		ppbv	5.00		83.2	80-120			

LCS (BZF0424-BS1)	Prepared & Analyzed: 06/16/2016						
1,1,1-Trichloroethane	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130
1,1,2,2-Tetrachloroethane	5.82 ppbv	0.5	ppbv	5.00	ppbv	116	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	4.84 ppbv	0.5	ppbv	5.00	ppbv	96.8	70-130
1,1,2-Trichloroethane	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130
1,1-Dichloroethane	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130
1,1-Dichloroethylene	4.84 ppbv	0.5	ppbv	5.00	ppbv	96.8	70-130
1,2,4-Trimethylbenzene	5.98 ppbv	0.5	ppbv	5.00	ppbv	120	70-130
1,2-Dibromoethane (EDB)	5.49 ppbv	0.5	ppbv	5.00	ppbv	110	70-130
1,2-Dichlorobenzene	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130



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Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0424 - No Prep VOC

LCS (BZF0424-BS1) Prepared & Analyzed: 06/16/2016

1,2-Dichloroethane	5.35 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
1,2-Dichloropropane	5.27 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
1,2-Dichlorotetrafluoroethane	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130			
1,3,5-Trimethylbenzene	5.72 ppbv	0.5	ppbv	5.00	ppbv	114	70-130			
1,3-Butadiene	4.82 ppbv	0.5	ppbv	5.00	ppbv	96.4	70-130			
1,3-Dichlorobenzene	4.77 ppbv	0.5	ppbv	5.00	ppbv	95.4	70-130			
1,4-Dichlorobenzene	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130			
1,4-Dioxane	6.32 ppbv	0.5	ppbv	5.00	ppbv	126	70-130			
2-Butanone (MEK)	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
4-Methyl-2-pentanone (MIBK)	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Allyl chloride	5.00 ppbv	0.5	ppbv	5.00	ppbv	100	70-130			
Benzene	5.41 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
Benzyl Chloride	5.17 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
Bromodichloromethane	5.27 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Bromoform	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Bromomethane	5.45 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Carbon Disulfide	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130			
Carbon Tetrachloride	5.27 ppbv	0.5	ppbv	5.00	ppbv	105	70-130			
Chlorobenzene	5.17 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
Chloroethane	5.75 ppbv	0.5	ppbv	5.00	ppbv	115	70-130			
Chloroform	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Chloromethane	5.52 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
cis-1,2-Dichloroethylene	5.15 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
cis-1,3-Dichloropropene	5.50 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
Cyclohexane	5.22 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Dichlorodifluoromethane	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
Ethyl acetate	4.82 ppbv	0.5	ppbv	5.00	ppbv	96.4	70-130			
Ethylbenzene	5.53 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
Heptane	5.44 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Hexane	5.21 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Isopropylbenzene	5.81 ppbv	0.50	ppbv		ppbv		70-130			
m+p-Xylenes	11.4 ppbv	1	ppbv	10.0	ppbv	114	70-130			
Methylene chloride	5.06 ppbv	1.00	ppbv		ppbv		70-130			
Methyl-t-butyl ether (MTBE)	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
o-Xylene	5.73 ppbv	0.5	ppbv	5.00	ppbv	115	70-130			
Propylene	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Styrene	6.07 ppbv	0.5	ppbv	5.00	ppbv	121	70-130			



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Certificate of Analysis

Final Report

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0424 - No Prep VOC

LCS (BZF0424-BS1) Prepared & Analyzed: 06/16/2016										
Tetrachloroethylene (PCE)	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130			
Tetrahydrofuran	6.25 ppbv	0.5	ppbv	5.00	ppbv	125	70-130			
Toluene	5.67 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
trans-1,2-Dichloroethylene	4.99 ppbv	0.5	ppbv	5.00	ppbv	99.8	70-130			
trans-1,3-Dichloropropene	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
Trichloroethylene	5.58 ppbv	0.5	ppbv	5.00	ppbv	112	70-130			
Trichlorofluoromethane	5.29 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Vinyl acetate	5.48 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
Vinyl bromide	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130			
Vinyl chloride	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Xylenes, Total	17.1 ppbv	1.50	ppbv		ppbv		70-130			
Surr: 4-Bromofluorobenzene	4.93		ppbv	5.00	ppbv	98.6	70-130			

LCS Dup (BZF0424-BSD1) Prepared & Analyzed: 06/16/2016										
1,1,1-Trichloroethane	5.79 ppbv	0.5	ppbv	5.00	ppbv	116	70-130	3.34	25	
1,1,2,2-Tetrachloroethane	6.06 ppbv	0.5	ppbv	5.00	ppbv	121	70-130	4.04	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.87 ppbv	0.5	ppbv	5.00	ppbv	97.4	70-130	0.618	25	
1,1,2-Trichloroethane	5.76 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	3.53	25	
1,1-Dichloroethane	5.12 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.195	25	
1,1-Dichloroethylene	4.80 ppbv	0.5	ppbv	5.00	ppbv	96.0	70-130	0.830	25	
1,2,4-Trimethylbenzene	6.27 ppbv	0.5	ppbv	5.00	ppbv	125	70-130	4.73	25	
1,2-Dibromoethane (EDB)	5.60 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	1.98	25	
1,2-Dichlorobenzene	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130	3.73	25	
1,2-Dichloroethane	5.42 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	1.30	25	
1,2-Dichloropropane	5.66 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	7.14	25	
1,2-Dichlorotetrafluoroethane	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	7.51	25	
1,3,5-Trimethylbenzene	5.96 ppbv	0.5	ppbv	5.00	ppbv	119	70-130	4.11	25	
1,3-Butadiene	4.69 ppbv	0.5	ppbv	5.00	ppbv	93.8	70-130	2.73	25	
1,3-Dichlorobenzene	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130	4.31	25	
1,4-Dichlorobenzene	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130	3.73	25	
1,4-Dioxane	6.56 ppbv	0.5	ppbv	5.00	ppbv	131	70-130	3.73	25	
2-Butanone (MEK)	5.19 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	1.55	25	
4-Methyl-2-pentanone (MIBK)	5.49 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	7.56	25	
Allyl chloride	4.57 ppbv	0.5	ppbv	5.00	ppbv	91.4	70-130	8.99	25	
Benzene	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	2.73	25	
Benzyl Chloride	5.45 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	5.27	25	L



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Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0424 - No Prep VOC

Prepared & Analyzed: 06/16/2016										
Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Bromodichloromethane	5.44 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	3.17	25	
Bromoform	5.51 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	1.46	25	
Bromomethane	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	4.12	25	
Carbon Disulfide	4.73 ppbv	0.5	ppbv	5.00	ppbv	94.6	70-130	1.05	25	
Carbon Tetrachloride	5.42 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	2.81	25	
Chlorobenzene	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	0.193	25	
Chloroethane	5.68 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	1.22	25	
Chloroform	5.38 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	0.925	25	
Chloromethane	5.54 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	0.362	25	
cis-1,2-Dichloroethylene	5.19 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	0.774	25	
cis-1,3-Dichloropropene	5.72 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	3.92	25	
Cyclohexane	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	0.769	25	
Dichlorodifluoromethane	5.42 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	0.927	25	
Ethyl acetate	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	1.85	25	
Ethylbenzene	5.66 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	2.32	25	
Heptane	5.59 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	2.72	25	
Hexane	5.32 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	2.09	25	
Isopropylbenzene	6.04 ppbv	0.50	ppbv		ppbv		70-130	3.88	25	
m+p-Xylenes	11.6 ppbv	1	ppbv	10.0	ppbv	116	70-130	2.26	25	
Methylene chloride	4.89 ppbv	1.00	ppbv		ppbv		70-130	3.42	25	
Methyl-t-butyl ether (MTBE)	5.08 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.197	25	
o-Xylene	5.88 ppbv	0.5	ppbv	5.00	ppbv	118	70-130	2.58	25	
Propylene	5.12 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.588	25	
Styrene	6.14 ppbv	0.5	ppbv	5.00	ppbv	123	70-130	1.15	25	
Tetrachloroethylene (PCE)	5.38 ppbv	0.5	ppbv	5.00	ppbv	108	70-130	0.925	25	
Tetrahydrofuran	6.66 ppbv	0.5	ppbv	5.00	ppbv	133	70-130	6.35	25	L
Toluene	5.81 ppbv	0.5	ppbv	5.00	ppbv	116	70-130	2.44	25	
trans-1,2-Dichloroethylene	5.01 ppbv	0.5	ppbv	5.00	ppbv	100	70-130	0.400	25	
trans-1,3-Dichloropropene	5.83 ppbv	0.5	ppbv	5.00	ppbv	117	70-130	4.74	25	
Trichloroethylene	5.58 ppbv	0.5	ppbv	5.00	ppbv	112	70-130	0.00	25	
Trichlorofluoromethane	5.21 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	1.52	25	
Vinyl acetate	5.54 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.09	25	
Vinyl bromide	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	1.64	25	
Vinyl chloride	5.34 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	4.40	25	
Xylenes, Total	17.5 ppbv	1.50	ppbv		ppbv		70-130	2.37	25	
Surr: 4-Bromofluorobenzene	5.04		ppbv	5.00	ppbv	101	70-130			



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Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
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Batch BZF0457 - No Prep VOC

Blank (BZF0457-BLK1)	Prepared & Analyzed: 06/18/2016									
1,1,1-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
1,2,4-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dibromoethane (EDB)	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,2-Dichloropropane	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorotetrafluoroethane	<0.20 ppbv	0.50	ppbv							
1,3,5-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,3-Butadiene	<0.20 ppbv	0.50	ppbv							
1,3-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dioxane	<0.20 ppbv	0.50	ppbv							
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv							
Acrolein	<0.20 ppbv	0.50	ppbv							
Allyl chloride	<0.20 ppbv	0.50	ppbv							
Benzene	<0.20 ppbv	0.50	ppbv							
Benzyl Chloride	<0.20 ppbv	0.50	ppbv							
Bromodichloromethane	<0.20 ppbv	0.50	ppbv							
Bromoform	<0.20 ppbv	0.50	ppbv							
Bromomethane	<0.20 ppbv	0.50	ppbv							
Carbon Disulfide	<0.50 ppbv	0.50	ppbv							
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv							
Chlorobenzene	<0.20 ppbv	0.50	ppbv							
Chloroethane	<0.20 ppbv	0.50	ppbv							
Chloroform	<0.20 ppbv	0.50	ppbv							
Chloromethane	<0.20 ppbv	0.50	ppbv							
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0457 - No Prep VOC										
Blank (BZF0457-BLK1)										
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv							
o-Xylene	<0.20 ppbv	0.50	ppbv							
Propylene	<0.20 ppbv	0.50	ppbv							
Styrene	<0.20 ppbv	0.50	ppbv							
TBA	<0.50 ppbv	0.50	ppbv							
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv							
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv							
Toluene	<0.20 ppbv	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Trichloroethylene	<0.20 ppbv	0.50	ppbv							
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv							
Vinyl acetate	<0.20 ppbv	0.50	ppbv							
Vinyl bromide	<0.20 ppbv	0.50	ppbv							
Vinyl chloride	<0.20 ppbv	0.50	ppbv							
Xylenes, Total	<0.60 ppbv	1.50	ppbv							
<i>Surr: 4-Bromofluorobenzene</i>	4.42		ppbv	5.00		88.4	80-120			

LCS (BZF0457-BS1)	Prepared & Analyzed: 06/18/2016						
1,1,1-Trichloroethane	5.63 ppbv	0.5	ppbv	5.00	ppbv	113	70-130
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv		ppbv		70-130
1,1,2,2-Tetrachloroethane	5.96 ppbv	0.5	ppbv	5.00	ppbv	119	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	4.84 ppbv	0.5	ppbv	5.00	ppbv	96.8	70-130
1,1,2-Trichloroethane	5.63 ppbv	0.5	ppbv	5.00	ppbv	113	70-130
1,1-Dichloroethane	5.10 ppbv	0.5	ppbv	5.00	ppbv	102	70-130
1,1-Dichloroethylene	4.69 ppbv	0.5	ppbv	5.00	ppbv	93.8	70-130
1,2,4-Trimethylbenzene	6.15 ppbv	0.5	ppbv	5.00	ppbv	123	70-130
1,2-Dibromoethane (EDB)	5.63 ppbv	0.5	ppbv	5.00	ppbv	113	70-130



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Richmond, VA 23225 Date Received: June 3, 2016 16:58
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Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0457 - No Prep VOC

LCS (BZF0457-BS1) Prepared & Analyzed: 06/18/2016

1,2-Dichlorobenzene	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130			
1,2-Dichloroethane	5.30 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
1,2-Dichloropropane	5.32 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
1,2-Dichlorotetrafluoroethane	4.39 ppbv	0.5	ppbv	5.00	ppbv	87.8	70-130			
1,3,5-Trimethylbenzene	5.91 ppbv	0.5	ppbv	5.00	ppbv	118	70-130			
1,3-Butadiene	4.32 ppbv	0.5	ppbv	5.00	ppbv	86.4	70-130			
1,3-Dichlorobenzene	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130			
1,4-Dichlorobenzene	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130			
1,4-Dioxane	6.36 ppbv	0.5	ppbv	5.00	ppbv	127	70-130			
2-Butanone (MEK)	5.06 ppbv	0.5	ppbv	5.00	ppbv	101	70-130			
4-Methyl-2-pentanone (MIBK)	5.17 ppbv	0.5	ppbv	5.00	ppbv	103	70-130			
Acrolein	<0.20 ppbv	0.50	ppbv		ppbv		70-130			
Allyl chloride	4.81 ppbv	0.5	ppbv	5.00	ppbv	96.2	70-130			
Benzene	5.50 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
Benzyl Chloride	5.81 ppbv	0.5	ppbv	5.00	ppbv	116	70-130			
Bromodichloromethane	5.08 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Bromoform	5.53 ppbv	0.5	ppbv	5.00	ppbv	111	70-130			
Bromomethane	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130			
Carbon Disulfide	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130			
Carbon Tetrachloride	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Chlorobenzene	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Chloroethane	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130			
Chloroform	5.36 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
Chloromethane	4.90 ppbv	0.5	ppbv	5.00	ppbv	98.0	70-130			
cis-1,2-Dichloroethylene	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130			
cis-1,3-Dichloropropene	5.66 ppbv	0.5	ppbv	5.00	ppbv	113	70-130			
Cyclohexane	5.06 ppbv	0.5	ppbv	5.00	ppbv	101	70-130			
Dichlorodifluoromethane	4.79 ppbv	0.5	ppbv	5.00	ppbv	95.8	70-130			
Ethyl acetate	3.86 ppbv	0.5	ppbv	5.00	ppbv	77.2	70-130			
Ethylbenzene	5.94 ppbv	0.5	ppbv	5.00	ppbv	119	70-130			
Heptane	5.22 ppbv	0.5	ppbv	5.00	ppbv	104	70-130			
Hexane	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
Isopropylbenzene	6.08 ppbv	0.50	ppbv		ppbv		70-130			
m+p-Xylenes	11.9 ppbv	1	ppbv	10.0	ppbv	119	70-130			
Methyl methacrylate	<0.20 ppbv	0.50	ppbv		ppbv		70-130			
Methylene chloride	4.69 ppbv	1.00	ppbv		ppbv		70-130			
Methyl-t-butyl ether (MTBE)	5.04 ppbv	0.5	ppbv	5.00	ppbv	101	70-130			



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0457 - No Prep VOC

LCS (BZF0457-BS1)							Prepared & Analyzed: 06/18/2016			
o-Xylene	6.03 ppbv	0.5	ppbv	5.00	ppbv	121	70-130			
Propylene	3.96 ppbv	0.5	ppbv	5.00	ppbv	79.2	70-130			
Styrene	6.08 ppbv	0.5	ppbv	5.00	ppbv	122	70-130			
TBA	<0.50 ppbv	0.50	ppbv		ppbv		70-130			
Tetrachloroethylene (PCE)	5.50 ppbv	0.5	ppbv	5.00	ppbv	110	70-130			
Tetrahydrofuran	6.14 ppbv	0.5	ppbv	5.00	ppbv	123	70-130			
Toluene	5.74 ppbv	0.5	ppbv	5.00	ppbv	115	70-130			
trans-1,2-Dichloroethylene	4.87 ppbv	0.5	ppbv	5.00	ppbv	97.4	70-130			
trans-1,3-Dichloropropene	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130			
Trichloroethylene	5.39 ppbv	0.5	ppbv	5.00	ppbv	108	70-130			
Trichlorofluoromethane	5.05 ppbv	0.5	ppbv	5.00	ppbv	101	70-130			
Vinyl acetate	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130			
Vinyl bromide	4.45 ppbv	0.5	ppbv	5.00	ppbv	89.0	70-130			
Vinyl chloride	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130			
Xylenes, Total	17.9 ppbv	1.50	ppbv		ppbv		70-130			
Surr: 4-Bromofluorobenzene	5.36		ppbv	5.00	ppbv	107	70-130			

LCS Dup (BZF0457-BSD1)							Prepared & Analyzed: 06/18/2016			
1,1,1-Trichloroethane	5.71 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	1.41	25	
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25	
1,1,2,2-Tetrachloroethane	6.00 ppbv	0.5	ppbv	5.00	ppbv	120	70-130	0.669	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130	2.85	25	
1,1,2-Trichloroethane	5.65 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	0.355	25	
1,1-Dichloroethane	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	1.56	25	
1,1-Dichloroethylene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	3.35	25	
1,2,4-Trimethylbenzene	6.11 ppbv	0.5	ppbv	5.00	ppbv	122	70-130	0.653	25	
1,2-Dibromoethane (EDB)	5.57 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.07	25	
1,2-Dichlorobenzene	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130	0.840	25	
1,2-Dichloroethane	5.47 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	3.16	25	
1,2-Dichloropropane	5.48 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	2.96	25	
1,2-Dichlorotetrafluoroethane	4.83 ppbv	0.5	ppbv	5.00	ppbv	96.6	70-130	9.54	25	
1,3,5-Trimethylbenzene	5.95 ppbv	0.5	ppbv	5.00	ppbv	119	70-130	0.675	25	
1,3-Butadiene	4.48 ppbv	0.5	ppbv	5.00	ppbv	89.6	70-130	3.64	25	
1,3-Dichlorobenzene	4.83 ppbv	0.5	ppbv	5.00	ppbv	96.6	70-130	1.85	25	
1,4-Dichlorobenzene	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130	0.840	25	
1,4-Dioxane	6.60 ppbv	0.5	ppbv	5.00	ppbv	132	70-130	3.70	25	

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Certificate of Analysis

Final Report

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0457 - No Prep VOC

Prepared & Analyzed: 06/18/2016										
LCS Dup (BZF0457-BSD1)	Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
2-Butanone (MEK)	5.14 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	1.57	25	
4-Methyl-2-pentanone (MIBK)	5.44 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	5.09	25	
Acrolein	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25	
Allyl chloride	4.57 ppbv	0.5	ppbv	5.00	ppbv	91.4	70-130	5.12	25	
Benzene	5.69 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	3.40	25	
Benzyl Chloride	5.81 ppbv	0.5	ppbv	5.00	ppbv	116	70-130	0.00	25	
Bromodichloromethane	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	2.91	25	
Bromoform	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	1.82	25	
Bromomethane	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130	1.26	25	
Carbon Disulfide	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	3.95	25	
Carbon Tetrachloride	5.47 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	2.97	25	
Chlorobenzene	5.26 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	0.946	25	
Chloroethane	5.07 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	4.62	25	
Chloroform	5.36 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	0.00	25	
Chloromethane	5.57 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	12.8	25	
cis-1,2-Dichloroethylene	5.12 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	2.77	25	
cis-1,3-Dichloropropene	5.74 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	1.40	25	
Cyclohexane	5.27 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	4.07	25	
Dichlorodifluoromethane	5.33 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	10.7	25	
Ethyl acetate	3.87 ppbv	0.5	ppbv	5.00	ppbv	77.4	70-130	0.259	25	
Ethylbenzene	5.94 ppbv	0.5	ppbv	5.00	ppbv	119	70-130	0.00	25	
Heptane	5.27 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	0.953	25	
Hexane	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	2.71	25	
Isopropylbenzene	6.14 ppbv	0.50	ppbv		ppbv		70-130	0.982	25	
m+p-Xylenes	11.7 ppbv	1	ppbv	10.0	ppbv	117	70-130	1.69	25	
Methyl methacrylate	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25	
Methylene chloride	4.89 ppbv	1.00	ppbv		ppbv		70-130	4.18	25	
Methyl-t-butyl ether (MTBE)	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.987	25	
o-Xylene	6.14 ppbv	0.5	ppbv	5.00	ppbv	123	70-130	1.81	25	
Propylene	3.84 ppbv	0.5	ppbv	5.00	ppbv	76.8	70-130	3.08	25	
Styrene	6.01 ppbv	0.5	ppbv	5.00	ppbv	120	70-130	1.16	25	
TBA	<0.50 ppbv	0.50	ppbv		ppbv		70-130		25	
Tetrachloroethylene (PCE)	5.57 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.26	25	
Tetrahydrofuran	6.41 ppbv	0.5	ppbv	5.00	ppbv	128	70-130	4.30	25	
Toluene	5.80 ppbv	0.5	ppbv	5.00	ppbv	116	70-130	1.04	25	
trans-1,2-Dichloroethylene	5.05 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	3.63	25	
trans-1,3-Dichloropropene	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	3.48	25	



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Final Report

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Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0457 - No Prep VOC

LCS Dup (BZF0457-BSD1) Prepared & Analyzed: 06/18/2016										
Trichloroethylene	5.75 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	6.46	25	
Trichlorofluoromethane	5.17 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	2.35	25	
Vinyl acetate	4.88 ppbv	0.5	ppbv	5.00	ppbv	97.6	70-130	0.411	25	
Vinyl bromide	4.82 ppbv	0.5	ppbv	5.00	ppbv	96.4	70-130	7.98	25	
Vinyl chloride	4.88 ppbv	0.5	ppbv	5.00	ppbv	97.6	70-130	3.55	25	
Xylenes, Total	17.8 ppbv	1.50	ppbv		ppbv		70-130	0.503	25	
Surr: 4-Bromofluorobenzene	5.19		ppbv	5.00	ppbv	104	70-130			

Batch BZF0488 - No Prep VOC

Blank (BZF0488-BLK1) Prepared & Analyzed: 06/16/2016										
1,1,1-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv	0.50	ppbv							
1,1,2-Trichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,1-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
1,2,4-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dibromoethane (EDB)	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,2-Dichloroethane	<0.20 ppbv	0.50	ppbv							
1,2-Dichloropropane	<0.20 ppbv	0.50	ppbv							
1,2-Dichlorotetrafluoroethane	<0.20 ppbv	0.50	ppbv							
1,3,5-Trimethylbenzene	<0.20 ppbv	0.50	ppbv							
1,3-Butadiene	<0.20 ppbv	0.50	ppbv							
1,3-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
1,4-Dichlorobenzene	<0.20 ppbv	0.50	ppbv							
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv							
Acrolein	<0.20 ppbv	0.50	ppbv							
Allyl chloride	<0.20 ppbv	0.50	ppbv							
Benzene	<0.20 ppbv	0.50	ppbv							
Benzyl Chloride	<0.20 ppbv	0.50	ppbv							
Bromodichloromethane	<0.20 ppbv	0.50	ppbv							
Bromoform	<0.20 ppbv	0.50	ppbv							
Bromomethane	<0.20 ppbv	0.50	ppbv							



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0488 - No Prep VOC

Blank (BZF0488-BLK1)	Prepared & Analyzed: 06/16/2016									
Carbon Disulfide	<0.50 ppbv	0.50	ppbv							
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv							
Chlorobenzene	<0.20 ppbv	0.50	ppbv							
Chloroethane	<0.20 ppbv	0.50	ppbv							
Chloroform	<0.20 ppbv	0.50	ppbv							
Chloromethane	<0.20 ppbv	0.50	ppbv							
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv							
o-Xylene	<0.20 ppbv	0.50	ppbv							
Propylene	<0.20 ppbv	0.50	ppbv							
Styrene	<0.20 ppbv	0.50	ppbv							
TBA	<0.50 ppbv	0.50	ppbv							
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv							
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv							
Toluene	<0.20 ppbv	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Trichloroethylene	<0.20 ppbv	0.50	ppbv							
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv							
Vinyl acetate	<0.20 ppbv	0.50	ppbv							
Vinyl bromide	<0.20 ppbv	0.50	ppbv							
Vinyl chloride	<0.20 ppbv	0.50	ppbv							
Xylenes, Total	<0.60 ppbv	1.50	ppbv							

Surr: 4-Bromofluorobenzene 5.35 ppbv 5.00 107 80-120



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Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0488 - No Prep VOC

LCS (BZF0488-BS1) Prepared & Analyzed: 06/16/2016

1,1,1-Trichloroethane	4.60 ppbv	0.5	ppbv	5.00	ppbv	92.0	70-130			
1,1,1,2-Tetrachloroethane	0.36 ppbv	0.50	ppbv		ppbv		70-130			
1,1,2,2-Tetrachloroethane	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	4.25 ppbv	0.5	ppbv	5.00	ppbv	85.0	70-130			
1,1,2-Trichloroethane	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130			
1,1-Dichloroethane	4.42 ppbv	0.5	ppbv	5.00	ppbv	88.4	70-130			
1,1-Dichloroethylene	4.44 ppbv	0.5	ppbv	5.00	ppbv	88.8	70-130			
1,2,4-Trimethylbenzene	4.77 ppbv	0.5	ppbv	5.00	ppbv	95.4	70-130			
1,2-Dibromoethane (EDB)	4.70 ppbv	0.5	ppbv	5.00	ppbv	94.0	70-130			
1,2-Dichlorobenzene	4.80 ppbv	0.5	ppbv	5.00	ppbv	96.0	70-130			
1,2-Dichloroethane	4.48 ppbv	0.5	ppbv	5.00	ppbv	89.6	70-130			
1,2-Dichloropropane	4.50 ppbv	0.5	ppbv	5.00	ppbv	90.0	70-130			
1,2-Dichlorotetrafluoroethane	4.66 ppbv	0.5	ppbv	5.00	ppbv	93.2	70-130			
1,3,5-Trimethylbenzene	4.77 ppbv	0.5	ppbv	5.00	ppbv	95.4	70-130			
1,3-Dichlorobenzene	4.59 ppbv	0.5	ppbv	5.00	ppbv	91.8	70-130			
1,4-Dichlorobenzene	4.53 ppbv	0.5	ppbv	5.00	ppbv	90.6	70-130			
1,4-Dioxane	4.54 ppbv	0.5	ppbv	5.00	ppbv	90.8	70-130			
Acrolein	0.66 ppbv	0.50	ppbv		ppbv		70-130			
Allyl chloride	4.05 ppbv	0.5	ppbv	5.00	ppbv	81.0	70-130			
Benzene	4.47 ppbv	0.5	ppbv	5.00	ppbv	89.4	70-130			
Bromodichloromethane	4.41 ppbv	0.5	ppbv	5.00	ppbv	88.2	70-130			
Bromoform	4.69 ppbv	0.5	ppbv	5.00	ppbv	93.8	70-130			
Bromomethane	4.51 ppbv	0.5	ppbv	5.00	ppbv	90.2	70-130			
Carbon Disulfide	3.67 ppbv	0.5	ppbv	5.00	ppbv	73.4	70-130			
Carbon Tetrachloride	4.59 ppbv	0.5	ppbv	5.00	ppbv	91.8	70-130			
Chlorobenzene	4.51 ppbv	0.5	ppbv	5.00	ppbv	90.2	70-130			
Chloroethane	4.34 ppbv	0.5	ppbv	5.00	ppbv	86.8	70-130			
Chloroform	4.45 ppbv	0.5	ppbv	5.00	ppbv	89.0	70-130			
Chloromethane	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130			
cis-1,2-Dichloroethylene	4.20 ppbv	0.5	ppbv	5.00	ppbv	84.0	70-130			
cis-1,3-Dichloropropene	4.43 ppbv	0.5	ppbv	5.00	ppbv	88.6	70-130			
Cyclohexane	4.22 ppbv	0.5	ppbv	5.00	ppbv	84.4	70-130			
Dichlorodifluoromethane	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130			
Ethylbenzene	4.75 ppbv	0.5	ppbv	5.00	ppbv	95.0	70-130			
Isopropylbenzene	4.90 ppbv	0.50	ppbv		ppbv		70-130			
m+p-Xylenes	9.33 ppbv	1	ppbv	10.0	ppbv	93.3	70-130			
Methylene chloride	4.13 ppbv	1.00	ppbv		ppbv		70-130			



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Final Report

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
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Batch BZF0488 - No Prep VOC

LCS (BZF0488-BS1)							Prepared & Analyzed: 06/16/2016			
Methyl-t-butyl ether (MTBE)	4.43 ppbv	0.5	ppbv	5.00	ppbv	88.6	70-130			
o-Xylene	4.73 ppbv	0.5	ppbv	5.00	ppbv	94.6	70-130			
Propylene	4.10 ppbv	0.5	ppbv	5.00	ppbv	82.0	70-130			
Styrene	4.53 ppbv	0.5	ppbv	5.00	ppbv	90.6	70-130			
Tetrachloroethylene (PCE)	4.32 ppbv	0.5	ppbv	5.00	ppbv	86.4	70-130			
Tetrahydrofuran	4.97 ppbv	0.5	ppbv	5.00	ppbv	99.4	70-130			
Toluene	4.40 ppbv	0.5	ppbv	5.00	ppbv	88.0	70-130			
trans-1,2-Dichloroethylene	4.22 ppbv	0.5	ppbv	5.00	ppbv	84.4	70-130			
trans-1,3-Dichloropropene	4.58 ppbv	0.5	ppbv	5.00	ppbv	91.6	70-130			
Trichloroethylene	4.09 ppbv	0.5	ppbv	5.00	ppbv	81.8	70-130			
Trichlorofluoromethane	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130			
Vinyl bromide	4.14 ppbv	0.5	ppbv	5.00	ppbv	82.8	70-130			
Vinyl chloride	4.56 ppbv	0.5	ppbv	5.00	ppbv	91.2	70-130			
Xylenes, Total	14.1 ppbv	1.50	ppbv		ppbv		70-130			
Surr: 4-Bromofluorobenzene	5.30		ppbv	5.00	ppbv	106	70-130			

LCS Dup (BZF0488-BSD1)							Prepared & Analyzed: 06/16/2016			
1,1,1-Trichloroethane	4.80 ppbv	0.5	ppbv	5.00	ppbv	96.0	70-130	4.26	25	
1,1,1,2-Tetrachloroethane	0.38 ppbv	0.50	ppbv		ppbv		70-130	5.41	25	
1,1,2,2-Tetrachloroethane	5.30 ppbv	0.5	ppbv	5.00	ppbv	106	70-130	3.65	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.38 ppbv	0.5	ppbv	5.00	ppbv	87.6	70-130	3.01	25	
1,1,2-Trichloroethane	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	3.95	25	
1,1-Dichloroethane	4.58 ppbv	0.5	ppbv	5.00	ppbv	91.6	70-130	3.56	25	
1,1-Dichloroethylene	4.60 ppbv	0.5	ppbv	5.00	ppbv	92.0	70-130	3.54	25	
1,2,4-Trimethylbenzene	5.03 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	5.31	25	
1,2-Dibromoethane (EDB)	4.89 ppbv	0.5	ppbv	5.00	ppbv	97.8	70-130	3.96	25	
1,2-Dichlorobenzene	5.11 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	6.26	25	
1,2-Dichloroethane	4.68 ppbv	0.5	ppbv	5.00	ppbv	93.6	70-130	4.37	25	
1,2-Dichloropropane	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130	4.77	25	
1,2-Dichlorotetrafluoroethane	4.75 ppbv	0.5	ppbv	5.00	ppbv	95.0	70-130	1.91	25	
1,3,5-Trimethylbenzene	5.00 ppbv	0.5	ppbv	5.00	ppbv	100	70-130	4.71	25	
1,3-Dichlorobenzene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	5.51	25	
1,4-Dichlorobenzene	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130	5.37	25	
Acrolein	0.67 ppbv	0.50	ppbv		ppbv		70-130	1.50	25	
Allyl chloride	4.08 ppbv	0.5	ppbv	5.00	ppbv	81.6	70-130	0.738	25	
Benzene	4.53 ppbv	0.5	ppbv	5.00	ppbv	90.6	70-130	1.33	25	



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

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7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 3, 2016 16:58
Date Issued: June 21, 2016 12:05

Submitted To: Joe France Project Number: 36156.006

Client Site I.D.: Fulton Gasworks - Air Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0488 - No Prep VOC										
LCS Dup (BZF0488-BSD1)						Prepared & Analyzed: 06/16/2016				
Bromodichloromethane	4.52 ppbv	0.5	ppbv	5.00	ppbv	90.4	70-130	2.46	25	
Bromoform	4.89 ppbv	0.5	ppbv	5.00	ppbv	97.8	70-130	4.18	25	
Bromomethane	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130	4.55	25	
Carbon Disulfide	3.78 ppbv	0.5	ppbv	5.00	ppbv	75.6	70-130	2.95	25	
Carbon Tetrachloride	4.82 ppbv	0.5	ppbv	5.00	ppbv	96.4	70-130	4.89	25	
Chlorobenzene	4.64 ppbv	0.5	ppbv	5.00	ppbv	92.8	70-130	2.84	25	
Chloroethane	4.66 ppbv	0.5	ppbv	5.00	ppbv	93.2	70-130	7.11	25	
Chloroform	4.59 ppbv	0.5	ppbv	5.00	ppbv	91.8	70-130	3.10	25	
Chloromethane	4.81 ppbv	0.5	ppbv	5.00	ppbv	96.2	70-130	2.10	25	
cis-1,2-Dichloroethylene	4.37 ppbv	0.5	ppbv	5.00	ppbv	87.4	70-130	3.97	25	
cis-1,3-Dichloropropene	4.66 ppbv	0.5	ppbv	5.00	ppbv	93.2	70-130	5.06	25	
Cyclohexane	4.47 ppbv	0.5	ppbv	5.00	ppbv	89.4	70-130	5.75	25	
Dichlorodifluoromethane	4.93 ppbv	0.5	ppbv	5.00	ppbv	98.6	70-130	4.35	25	
Ethyl acetate	4.07 ppbv	0.5	ppbv	5.00	ppbv	81.4	70-130	22.4	25	
Ethylbenzene	4.94 ppbv	0.5	ppbv	5.00	ppbv	98.8	70-130	3.92	25	
Isopropylbenzene	5.15 ppbv	0.50	ppbv		ppbv		70-130	4.98	25	
m+p-Xylenes	9.89 ppbv	1	ppbv	10.0	ppbv	98.9	70-130	5.83	25	
Methylene chloride	4.40 ppbv	1.00	ppbv		ppbv		70-130	6.33	25	
Methyl-t-butyl ether (MTBE)	4.64 ppbv	0.5	ppbv	5.00	ppbv	92.8	70-130	4.63	25	
o-Xylene	5.05 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	6.54	25	
Propylene	4.35 ppbv	0.5	ppbv	5.00	ppbv	87.0	70-130	5.92	25	
Styrene	4.82 ppbv	0.5	ppbv	5.00	ppbv	96.4	70-130	6.20	25	
Tetrachloroethylene (PCE)	4.50 ppbv	0.5	ppbv	5.00	ppbv	90.0	70-130	4.08	25	
Tetrahydrofuran	5.20 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	4.52	25	
Toluene	4.47 ppbv	0.5	ppbv	5.00	ppbv	89.4	70-130	1.58	25	
trans-1,2-Dichloroethylene	4.23 ppbv	0.5	ppbv	5.00	ppbv	84.6	70-130	0.237	25	
trans-1,3-Dichloropropene	4.87 ppbv	0.5	ppbv	5.00	ppbv	97.4	70-130	6.14	25	
Trichloroethylene	4.32 ppbv	0.5	ppbv	5.00	ppbv	86.4	70-130	5.47	25	
Trichlorofluoromethane	4.94 ppbv	0.5	ppbv	5.00	ppbv	98.8	70-130	4.77	25	
Vinyl acetate	8.14 ppbv	0.5	ppbv	5.00	ppbv	163	70-130	12.9	25	
Vinyl bromide	4.30 ppbv	0.5	ppbv	5.00	ppbv	86.0	70-130	3.79	25	
Vinyl chloride	4.77 ppbv	0.5	ppbv	5.00	ppbv	95.4	70-130	4.50	25	
Xylenes, Total	14.9 ppbv	1.50	ppbv		ppbv		70-130	6.07	25	
Surr: 4-Bromofluorobenzene	5.34		ppbv	5.00	ppbv	107	70-130			L



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Certificate of Analysis

Final Report

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Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 3, 2016 16:58
		Date Issued:	June 21, 2016 12:05
Submitted To:	Joe France	Project Number:	36156.006
Client Site I.D.:	Fulton Gasworks - Air	Purchase Order:	

Certified Analytes included in this Report

Analyte	Certifications	Analyte	Certifications
EPA TO-15 in Air			
1,1,1-Trichloroethane	VELAP	Isopropylbenzene	VELAP
1,1,1,2-Tetrachloroethane	VELAP	m+p-Xylenes	VELAP
1,1,2,2-Tetrachloroethane	VELAP	Methyl methacrylate	VELAP
1,1,2-Trichloro-1,2,2-trifluoroethane	VELAP	Methylene chloride	VELAP
1,1,2-Trichloroethane	VELAP	Methyl-t-butyl ether (MTBE)	VELAP
1,1-Dichloroethane	VELAP	Naphthalene	VELAP
1,1-Dichloroethylene	VELAP	o-Xylene	VELAP
1,2,4-Trimethylbenzene	VELAP	Propylene	VELAP
1,2-Dibromoethane (EDB)	VELAP	Styrene	VELAP
1,2-Dichlorobenzene	VELAP	TBA	VELAP
1,2-Dichloroethane	VELAP	Tetrachloroethylene (PCE)	VELAP
1,2-Dichloropropane	VELAP	Tetrahydrofuran	VELAP
1,2-Dichlorotetrafluoroethane	VELAP	Toluene	VELAP
1,3,5-Trimethylbenzene	VELAP	trans-1,2-Dichloroethylene	VELAP
1,3-Butadiene	VELAP	trans-1,3-Dichloropropene	VELAP
1,3-Dichlorobenzene	VELAP	Trichloroethylene	VELAP
1,4-Dichlorobenzene	VELAP	Trichlorofluoromethane	VELAP
1,4-Dioxane	VELAP	Vinyl acetate	VELAP
2-Butanone (MEK)	VELAP	Vinyl bromide	VELAP
4-Methyl-2-pentanone (MIBK)	VELAP	Vinyl chloride	VELAP
Acrolein	VELAP	Xylenes, Total	VELAP
Allyl chloride	VELAP		
Benzene	VELAP		
Benzyl Chloride	VELAP		
Bromodichloromethane	VELAP		
Bromoform	VELAP		
Bromomethane	VELAP		
Carbon Disulfide	VELAP		
Carbon Tetrachloride	VELAP		
Chlorobenzene	VELAP		
Chloroethane	VELAP		
Chloroform	VELAP		
Chloromethane	VELAP		
cis-1,2-Dichloroethylene	VELAP		
cis-1,3-Dichloropropene	VELAP		
Cyclohexane	VELAP		
Dichlorodifluoromethane	VELAP		
Ethyl acetate	VELAP		
Ethylbenzene	VELAP		
Heptane	VELAP		
Hexane	VELAP		



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		Date Issued:	June 21, 2016 12:05
Submitted To:	Joe France	Project Number:	36156.006
Client Site I.D.:	Fulton Gasworks - Air	Purchase Order:	

Code	Description	Cert Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2016
NC	North Carolina DENR	495	12/31/2016
PADEP	NELAC-Pennsylvania	001	10/31/2016
VELAP Certificate #4337	NELAC-Virginia Certificate #8271	460021	06/15/2017
WVDEP	West Virginia DEP	350	11/30/2016

Qualifiers and Definitions

L	LCS recovery is outside of established acceptance limits
S	Surrogate recovery was outside acceptance criteria
RPD	Relative Percent Difference
Qual	Qualifiers
-RE	Denotes sample was re-analyzed
PF	Preparation Factor
MDL	Method Detection Limit
LOQ	Limit of Quantitation
ppbv	parts per billion by volume
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

AIR ANALYSIS
CHAIN OF CUSTODY

1 of 5

COMPANY NAME: Timmons Group	INVOICE TO: John Russell II	PROJECT NAME/Quote #: Fulton
CONTACT: John Russell	INVOICE CONTACT:	SITE NAME: Fulton
ADDRESS: 1001 Boulders Pkwy Suite 300	INVOICE ADDRESS: 1001 Boulders Pkwy Sh 300	PROJECT NUMBER: 36156.006
PHONE #: 804-200-6427	INVOICE PHONE #: 804-200-6427	P.O. #:
FAX #:	EMAIL: john.russell@timmons.com	

SAMPLER NAME (PRINT): Julia Campuz
SAMPLER SIGNATURE: Julia Campuz
Turn Around Time: STD Day(s)

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.	Regulator Info		Canister Information					Sampling Start Information				Sampling Stop Information				Matrix (See Codes)	ANALYSIS
	Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg))	LAB Receiving Canister vacuum (in Hg)	Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F		
1) VP-1	N/A	N/A	#16072	1	160525-01	30	2	6/3	8:58	\	76°F	6/3	10:25	\	78	SG X	T015
2) VP-2	N/A	N/A	#16073	1	160525-01	30	2	6/3	9:04	\	76°F	6/3	10:27	\	78	SG X	
3) VP-3	N/A	N/A	#16074	1	160525-01	30	0	6/3	9:07	\	76°F	6/3	10:30	\	78	SG X	
4) VP-4	N/A	N/A	#16174	1	160525-03	30	3	6/3	9:11	\	76°F		10:32	\	78	SG X	

RELINQUISHED: <i>John Russell</i>	DATE / TIME 6/3/16; 3:19	RECEIVED:	DATE / TIME	QC Data Package	LAB USE ONLY
RELINQUISHED: <i>John Russell</i>	DATE / TIME 6/3/16 4:50	RECEIVED <i>John Russell 6-3-16 4:50</i>	DATE / TIME 6/3/16 4:50	Level I <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/>	TG Fulton Gasworks - Air Recd: 06/03/2016 Due: 06/17/2016
RELINQUISHED: <i>John Russell</i>	DATE / TIME	RECEIVED:	DATE / TIME		16F0127

v130325002



AIR ANALYSIS
CHAIN OF CUSTODY

1941 REYMET ROAD
RICHMOND, VIRGINIA 23237
(804) 358-8295 PHONE
(804)358-8297 FAX

2 of 5

COMPANY NAME: <i>Hammoms Group</i>	INVOICE TO: <i>Hammoms Group</i>	PROJECT NAME/Quote #: <i>Fulton</i>
CONTACT: <i>John Russell</i>	INVOICE CONTACT: <i>John Russell</i>	SITE NAME: <i>Fulton</i>
ADDRESS: <i>1001 Boulders Hwy Ste 300</i>	INVOICE ADDRESS: <i>1001 Boulders Pkwy Ste 300</i>	PROJECT NUMBER: <i>36156.006</i>
PHONE #: <i>804-200-6427</i>	INVOICE PHONE #: <i>804-200-6427</i>	P.O. #:
FAX #:	EMAIL: <i>John.Russell@hammons.com</i>	

SAMPLER NAME (PRINT): <i>Julia Campuz</i>	SAMPLER SIGNATURE: <i>Julia Campuz</i>	Turn Around Time: <i>STD</i> Day(s)
---	--	-------------------------------------

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.	Regulator Info		Canister Information				Sampling Start Information				Sampling Stop Information				Matrix (See Codes)	ANALYSIS
	Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister vacuum (in Hg)	Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	
1) VP-5	N/A	N/A	#16076	1	160525-01	30	Z	6/3	9:20	/	76°F	6/3	10:36	/	78 SG	X
2) VP-6	N/A	N/A	#16077	1	160525-01	30	Z	6/3	9:23	/	76	6/3	10:38	/	78 SG	X
3) VP-7	N/A	N/A	#16078	1	160525-01	30	Z	6/3	9:28	/	76	6/3	10:41	/	78 SG	X
4) VP-8	N/A	N/A	#16079	1	160525-01	30	4	6/3	9:32	/	76	6/3	10:43	/	78 SG	X

RELINQUISHED: <i>Class</i>	DATE / TIME <i>6/3/16; 3:19</i>	RECEIVED: <i></i>	DATE / TIME <i></i>	QC Data Package Level I <input type="checkbox"/>	LAB USE ONLY <i>TG</i>	16F0127
RELINQUISHED: <i>myler Brown</i>	DATE / TIME <i>6/3/16 4:50</i>	RECEIVED: <i>6/3/16 10:31 AM 10:58</i>	DATE / TIME <i></i>	Level II <input type="checkbox"/>		
RELINQUISHED: <i></i>	DATE / TIME <i></i>	RECEIVED: <i></i>	DATE / TIME <i></i>	Level III <input type="checkbox"/>		
				Level IV <input type="checkbox"/>		

Recd: 06/03/2016 Due: 06/17/2016

v130325002

AIR ANALYSIS
CHAIN OF CUSTODY

3 of 5

COMPANY NAME: Timmons Group	INVOICE TO: Timmons Group	PROJECT NAME/Quote #: Fulton
CONTACT: John Russell	INVOICE CONTACT: John Russell	SITE NAME: Fulton
ADDRESS: 1001 Boulders Hwy Ste 300	INVOICE ADDRESS: 1001 Boulders Hwy Ste 300	PROJECT NUMBER: 36156-006
PHONE #: 804-200-6427	INVOICE PHONE #: 804-200-6427	P.O. #:
FAX #:	EMAIL: john.russell@timmons.com	

SAMPLER NAME (PRINT): Julia Campus SAMPLER SIGNATURE: *Julia Campus* Turn Around Time: 570 Day(s)

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.	Regulator Info		Canister Information					Sampling Start Information				Sampling Stop Information				Matrix (see Codes)	ANALYSIS
	Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister vacuum (in Hg)	Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F		
1) VP-9	N/A	N/A	#16703	1	160525-02	30	30	6/3	9:34	-	76°	6/3	10:45	-	76	SG X	
2) VP-10	N/A	N/A	#16080	1	160525-02	30	2	6/3	9:41	-	76	6/3	10:49	-	79	SG X	
3) VP-11	N/A	N/A	#16082	1	160525-02	30	2	6/3	9:46	-	76	6/3	10:51	-	79	SG X	
4) VP-12	N/A	N/A	#16083	1	160525-02	30	2	6/3	9:50	-	76	6/3	10:54	-	79	SG X	

RELINQUISHED: <i>John Russell</i>	DATE / TIME 6/3/16; 3:19	RECEIVED: /	DATE / TIME /	QC Data Package	LAB USE ONLY
RElinquished: <i>John Russell</i>	DATE / TIME 6/3/16 4:50	RECEIVED: <i>John Russell 6-3-16 11:58</i>	DATE / TIME /	Level I <input type="checkbox"/>	
RElinquished: /	DATE / TIME /	RECEIVED: /	DATE / TIME /	Level II <input type="checkbox"/>	
				Level III <input type="checkbox"/>	
				Level IV <input type="checkbox"/>	

16F0127

TG
Fulton Gasworks - Air
Recd: 06/03/2016 Due: 06/17/2016

v130325002

AIR ANALYSIS
CHAIN OF CUSTODY

4 of 5

COMPANY NAME: Timmons Group	INVOICE TO: Timmons Group	PROJECT NAME/Quote #: Fulton
CONTACT: John Russell	INVOICE CONTACT: John Russell	SITE NAME: Fulton
ADDRESS: 1001 Boulders Pkwy Ste 300	INVOICE ADDRESS: 1001 Boulders Pkwy Ste 300	PROJECT NUMBER: 36156,006
PHONE #: 804-200-6427	INVOICE PHONE #: 804-200-6427	P.O. #:
FAX #:	EMAIL: john.russell@timmons.com	

SAMPLER NAME (PRINT): Julie Camps SAMPLER SIGNATURE: Julie Camps Turn Around Time: 5D Day(s)

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.	Regulator Info		Canister Information					Sampling Start Information				Sampling Stop Information				Matrix (See Codes) T015	ANALYSIS		
	Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg))	LAB Receiving Canister vacuum (in Hg)	Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F				
								Barometric Pres. (in Hg): 30.05				Barometric Pres. (in Hg): 30.05							
1) VP-13	N/A	N/A	#16084	1	160525-02	30	2	6/3	9:57	/	76	6/3	10:58	/	81	SG X			
2) VP-14	N/A	N/A	#16085	1	160525-02	30	2	6/3	10:02	/	76	6/3	11:01	/	81	SG X			
3) VP-15	N/A	N/A	#16086	1	160525-02	30	2	6/3	10:06	/	76	6/3	11:06	/	81	SG X			
4) VP-16	N/A	N/A	#16045	1	160525-02	30	2	6/3	10:10	/	76	6/3	11:03	/	81	SG X			

RELINQUISHED: <i>John</i>	DATE / TIME 6/3/16 3:19	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 4:50	QC Data Package	LAB USE ONLY
RELINQUISHED: <i>John</i>	DATE / TIME 6/3/16 4:50	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 10:58	Level I <input type="checkbox"/>	TG 16F0127
RELINQUISHED: <i>John</i>	DATE / TIME 6/3/16 4:50	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 10:58	Level II <input type="checkbox"/>	Fulton Gasworks - Air
RELINQUISHED: <i>John</i>	DATE / TIME 6/3/16 4:50	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 10:58	Level III <input type="checkbox"/>	Recd: 06/03/2016 Due: 06/17/2016
RELINQUISHED: <i>John</i>	DATE / TIME 6/3/16 4:50	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 10:58	Level IV <input type="checkbox"/>	v130325002



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AIR ANALYSIS
CHAIN OF CUSTODY

5 of 5

COMPANY NAME: Timmons Group	INVOICE TO: Timmons Group	PROJECT NAME/Quote #: Fulton
CONTACT: John Russell	INVOICE CONTACT: John Russell	SITE NAME: Fulton
ADDRESS: 1001 Bonniers Hwy Ste 300	INVOICE ADDRESS: 1001 Bonniers Hwy Ste 300	PROJECT NUMBER: 36156.006
PHONE #: 804-200-6427	INVOICE PHONE #: 804-200-6427	P.O. #:
FAX #:	EMAIL: john.russell@timmons.com	

SAMPLER NAME (PRINT): Julia Camus SAMPLER SIGNATURE: Julie Camus Turn Around Time: 5D Day(s)

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.	Regulator Info		Canister Information				Sampling Start Information				Sampling Stop Information				Matrix (See Codes)	ANALYSIS
	Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister vacuum (in Hg)	Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	
1) VP-17	N/A	N/A	#16173	1	160525-03	30	2	6/3	10:15	/	76	6/3	Julia	/	81	SG X
2) VP-18	N/A	N/A	#16166	1	160525-03	30	2	6/3	10:16	/	78	6/3	11:11	/	81	SG X
3) VP-19	N/A	N/A	#16169	1	160525-03	30	2	6/3	10:22	-	78	6/3	11:14	/	81	SG X
4)	N/A	N/A	#16170	1	160525-03	30										

RELINQUISHED <i>John Russell</i>	DATE / TIME 6/3/16 3:19	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 4:50	QC Data Package Level I <input type="checkbox"/>	LAB USE ONLY
RELINQUISHED <i>John Russell</i>	DATE / TIME 6/3/16 4:50	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 4:50	Level II <input type="checkbox"/>	TG Fulton Gasworks - Air Recd: 06/03/2016 Due: 06/17/2016
RELINQUISHED <i>John Russell</i>	DATE / TIME 6/3/16 4:50	RECEIVED: <i>John</i>	DATE / TIME 6/3/16 4:50	Level III <input type="checkbox"/>	16F0127
				Level IV <input type="checkbox"/>	



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Sample Conditions Checklist

Opened by: (Initials)

John

Lab ID No.:

111F0127
6-6-16

Date Cooler Opened:

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
1.	How were samples received?			
	Fed Ex	<input type="checkbox"/>		
	UPS	<input type="checkbox"/>		
	Courier	<input checked="" type="checkbox"/>		
	Walk In	<input checked="" type="checkbox"/>		
2.	Were custody seals used?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3.	If yes, are custody seals unbroken and intact at the date and time of arrival?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Are the custody papers filled out completely and correctly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Do all bottle labels agree with custody papers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	If NO, are the samples just taken and received on ice?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	Are all samples within holding time for requested laboratory tests?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Is a sufficient amount of sample provided to perform the tests indicated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Are all samples in proper containers for the analyses requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Are all samples appropriately preserved for the analyses requested?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Are all volatile organic containers free of headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14.	Are all TOX containers free of headspace?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15.	Is Trip blank provided with each VOC sample set? Circle applicable method: (Document if trip blank is not received with the sample set)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

EPA 8011 EPA 504 EPA 8260 EPA 624

RSK-175 EPA 8015 (GRO) EPA 8021

EPA 524 *GRO Wisconsin DNR (water and/or methanol trip blank must be provided)

* See preservation log for Wisconsin soil DRO.

COMMENTS

Per John Russell & Joe France - samples to be logged & inventoried under France Environmental 6/7/16

FOR LAB USE ONLY:

CrVI preserved date/time: _____

Buffer Sol'n ID: _____

Analyst initials: _____

1N NaOH ID: _____ or

5N NaOH ID: _____

THIS DOCUMENT IS UNCONTROLLED WHEN PRINTED
F1302 Sample Condition 6_0.xls



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0127

Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 3, 2016 16:58
		Date Issued:	June 21, 2016 12:05
Submitted To:	Joe France	Project Number:	36156.006
Client Site I.D.:	Fulton Gasworks - Air	Purchase Order:	

Sample Conditions Checklist

Samples Received at:	22.00°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved . Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0320

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225

Date Received: June 10, 2016 12:35
Date Issued: June 20, 2016 16:08
Project Number: 34323.022

Submitted To: Joe France

Purchase Order:

Client Site I.D.: Fulton Gas Works

Enclosed are the results of analyses for samples received by the laboratory on 06/10/2016 12:35. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

A handwritten signature in black ink that reads "Ted Soyars".

Ted Soyars
Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized





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Certificate of Analysis

Final Report

Laboratory Order ID 16F0320

Client Name: France Environmental, Inc. Date Received: June 10, 2016 12:35
7834 Forest Hill Ave. Suite 7 Date Issued: June 20, 2016 16:08
Richmond, VA 23225 Project Number: 34323.022

Submitted To: Joe France Purchase Order:

Client Site I.D.: Fulton Gas Works

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
VP-9	16F0320-01	Air	06/10/2016 10:23	06/10/2016 12:35



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0320

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 10, 2016 12:35
Date Issued: June 20, 2016 16:08

Submitted To: Joe France Project Number: 34323.022

Client Site I.D.: Fulton Gas Works Purchase Order:

ANALYTICAL RESULTS

Project Location: Sample Description/Location: Initial Vacuum(in Hg): NA
Field Sample #: VP-9 Sub Description/Location: Final Vacuum(in Hg): NA
Sample ID: 16F0320-01 Canister ID: 16170 Receipt Vacuum(in Hg):
Sample Matrix: Air Canister Size: Flow Controller Type:
Sampled: 6/10/2016 10:23 Flow Controller ID: N/A
Sample Type:

Analyte	EPA TO-15									Date/Time Analyzed	Analyst	
	Results	ppbv	MDL	LOQ	Flag/Qual	ug/M³	MDL	LOQ	Dilution	PF		
1,1,1-Trichloroethane	ND	5.00	12.5			ND	27	68	1	25	6/18/16 20:24	RJW
1,1,1,2-Tetrachloroethane	ND	5.00	12.5			ND	34	86	1	25	6/18/16 20:24	RJW
1,1,2,2-Tetrachloroethane	ND	5.00	12.5			ND	34	86	1	25	6/18/16 20:24	RJW
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	5.00	12.5			ND	38	96	1	25	6/18/16 20:24	RJW
1,1,2-Trichloroethane	ND	5.00	12.5			ND	27	68	1	25	6/18/16 20:24	RJW
1,1-Dichloroethane	ND	5.00	12.5			ND	20	51	1	25	6/18/16 20:24	RJW
1,1-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25	6/18/16 20:24	RJW
1,2,4-Trimethylbenzene	ND	5.00	12.5			ND	25	61	1	25	6/18/16 20:24	RJW
1,2-Dibromoethane (EDB)	ND	5.00	12.5			ND	38	96	1	25	6/18/16 20:24	RJW
1,2-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25	6/18/16 20:24	RJW
1,2-Dichloroethane	ND	5.00	12.5			ND	20	51	1	25	6/18/16 20:24	RJW
1,2-Dichloropropane	ND	5.00	12.5			ND	23	58	1	25	6/18/16 20:24	RJW
1,2-Dichlorotetrafluoroethane	ND	5.00	12.5			ND	35	87	1	25	6/18/16 20:24	RJW
1,3,5-Trimethylbenzene	ND	5.00	12.5			ND	25	61	1	25	6/18/16 20:24	RJW
1,3-Butadiene	ND	5.00	12.5			ND	11	28	1	25	6/18/16 20:24	RJW
1,3-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25	6/18/16 20:24	RJW
1,4-Dichlorobenzene	ND	5.00	12.5			ND	30	75	1	25	6/18/16 20:24	RJW
1,4-Dioxane	ND	5.00	12.5			ND	18	45	1	25	6/18/16 20:24	RJW
2-Butanone (MEK)	ND	5.00	12.5			ND	15	37	1	25	6/18/16 20:24	RJW
4-Methyl-2-pentanone (MIBK)	ND	5.00	12.5			ND	57	140	1	25	6/18/16 20:24	RJW
Acrolein	ND	5.00	12.5			ND	11	29	1	25	6/18/16 20:24	RJW
Allyl chloride	ND	5.00	12.5			ND	16	39	1	25	6/18/16 20:24	RJW
Benzene	ND	5.00	12.5			ND	16	40	1	25	6/18/16 20:24	RJW
Benzyl Chloride	ND	5.00	12.5			ND	26	65	1	25	6/18/16 20:24	RJW
Bromodichloromethane	ND	5.00	12.5			ND	34	84	1	25	6/18/16 20:24	RJW
Bromoform	ND	5.00	12.5			ND	52	130	1	25	6/18/16 20:24	RJW
Bromomethane	ND	5.00	12.5			ND	19	49	1	25	6/18/16 20:24	RJW
Carbon Disulfide	ND	12.5	12.5			ND	39	39	1	25	6/18/16 20:24	RJW
Carbon Tetrachloride	ND	5.00	12.5			ND	31	79	1	25	6/18/16 20:24	RJW
Chlorobenzene	ND	5.00	12.5			ND	23	58	1	25	6/18/16 20:24	RJW
Chloroethane	ND	5.00	12.5			ND	13	33	1	25	6/18/16 20:24	RJW
Chloroform	ND	5.00	12.5			ND	24	61	1	25	6/18/16 20:24	RJW
Chloromethane	ND	5.00	12.5			ND	10	26	1	25	6/18/16 20:24	RJW
cis-1,2-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25	6/18/16 20:24	RJW



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0320

Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 10, 2016 12:35
		Date Issued:	June 20, 2016 16:08
Submitted To:	Joe France	Project Number:	34323.022
Client Site I.D.:	Fulton Gas Works	Purchase Order:	

ANALYTICAL RESULTS

Project Location:	Sample Description/Location:	Initial Vacuum(in Hg): NA
Field Sample #: VP-9	Sub Description/Location:	Final Vacuum(in Hg): NA
Sample ID: 16F0320-01	Canister ID: 16170	Receipt Vacuum(in Hg):
Sample Matrix: Air	Canister Size:	Flow Controller Type:
Sampled: 6/10/2016 10:23		Flow Controller ID: N/A
Sample Type:		

Analyte	EPA TO-15									Date/Time Analyzed	Analyst	
	Results	ppbv	MDL	LOQ	Flag/Qual	ug/M³	MDL	LOQ	Dilution	PF		
cis-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25	6/18/16 20:24	RJW
Cyclohexane	ND	5.00	12.5			ND	17	43	1	25	6/18/16 20:24	RJW
Dichlorodifluoromethane	ND	12.5	12.5			ND	62	62	1	25	6/18/16 20:24	RJW
Ethyl acetate	ND	5.00	12.5			ND	18	45	1	25	6/18/16 20:24	RJW
Ethylbenzene	ND	5.00	12.5			ND	22	54	1	25	6/18/16 20:24	RJW
Heptane	ND	5.00	12.5			ND	20	51	1	25	6/18/16 20:24	RJW
Hexane	ND	5.00	12.5			ND	18	44	1	25	6/18/16 20:24	RJW
Isopropylbenzene	ND	5.00	12.5			ND	25	61	1	25	6/18/16 20:24	RJW
m+p-Xylenes	ND	10.0	25.0			ND	43	110	1	25	6/18/16 20:24	RJW
Methyl methacrylate	ND	5.00	12.5			ND	20	51	1	25	6/18/16 20:24	RJW
Methylene chloride	ND	12.5	25.0			ND	43	87	1	25	6/18/16 20:24	RJW
Methyl-t-butyl ether (MTBE)	ND	5.00	12.5			ND	18	45	1	25	6/18/16 20:24	RJW
o-Xylene	ND	5.00	12.5			ND	22	54	1	25	6/18/16 20:24	RJW
Propylene	ND	5.00	12.5			ND	8.6	22	1	25	6/18/16 20:24	RJW
Styrene	ND	5.00	12.5			ND	21	53	1	25	6/18/16 20:24	RJW
TBA	ND	12.5	12.5			ND	38	38	1	25	6/18/16 20:24	RJW
Tetrachloroethylene (PCE)	ND	5.00	12.5			ND	34	85	1	25	6/18/16 20:24	RJW
Tetrahydrofuran	ND	5.00	12.5			ND	15	37	1	25	6/18/16 20:24	RJW
Toluene	ND	5.00	12.5			ND	19	47	1	25	6/18/16 20:24	RJW
trans-1,2-Dichloroethylene	ND	5.00	12.5			ND	20	50	1	25	6/18/16 20:24	RJW
trans-1,3-Dichloropropene	ND	5.00	12.5			ND	23	57	1	25	6/18/16 20:24	RJW
Trichloroethylene	ND	5.00	12.5			ND	27	67	1	25	6/18/16 20:24	RJW
Trichlorofluoromethane	ND	12.5	12.5			ND	70	70	1	25	6/18/16 20:24	RJW
Vinyl acetate	ND	5.00	12.5			ND	18	44	1	25	6/18/16 20:24	RJW
Vinyl bromide	ND	5.00	12.5			ND	22	55	1	25	6/18/16 20:24	RJW
Vinyl chloride	ND	5.00	12.5			ND	13	32	1	25	6/18/16 20:24	RJW
Xylenes, Total	ND	15.0	37.5			ND	65	160	1	25	6/18/16 20:24	RJW

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene	91.6	80-120	6/18/16 20:24



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0320

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 10, 2016 12:35
 Date Issued: June 20, 2016 16:08

Submitted To: Joe France Project Number: 34323.022

Client Site I.D.: Fulton Gas Works Purchase Order:

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS				Preparation Method: No Prep VOC	
16F0320-01	16.0 mL / 400 mL	EPA TO-15	BZF0457	SZF0496	AF60076



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Submitted To:	Joe France	Project Number:	34323.022
Client Site I.D.:	Fulton Gas Works	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Qual
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Batch BZF0457 - No Prep VOC

Blank (BZF0457-BLK1) Prepared & Analyzed: 06/18/2016

1,1,1-Trichloroethane	<0.20 ppbv	0.50	ppbv
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv
1,1,2,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv
1,1,2-Trichloro-1,2,2-trifluoroethane	<0.20 ppbv	0.50	ppbv
1,1,2-Trichloroethane	<0.20 ppbv	0.50	ppbv
1,1-Dichloroethane	<0.20 ppbv	0.50	ppbv
1,1-Dichloroethylene	<0.20 ppbv	0.50	ppbv
1,2,4-Trimethylbenzene	<0.20 ppbv	0.50	ppbv
1,2-Dibromoethane (EDB)	<0.20 ppbv	0.50	ppbv
1,2-Dichlorobenzene	<0.20 ppbv	0.50	ppbv
1,2-Dichloroethane	<0.20 ppbv	0.50	ppbv
1,2-Dichloropropane	<0.20 ppbv	0.50	ppbv
1,2-Dichlorotetrafluoroethane	<0.20 ppbv	0.50	ppbv
1,3,5-Trimethylbenzene	<0.20 ppbv	0.50	ppbv
1,3-Butadiene	<0.20 ppbv	0.50	ppbv
1,3-Dichlorobenzene	<0.20 ppbv	0.50	ppbv
1,4-Dichlorobenzene	<0.20 ppbv	0.50	ppbv
1,4-Dioxane	<0.20 ppbv	0.50	ppbv
2-Butanone (MEK)	<0.20 ppbv	0.50	ppbv
4-Methyl-2-pentanone (MIBK)	<0.20 ppbv	0.50	ppbv
Acrolein	<0.20 ppbv	0.50	ppbv
Allyl chloride	<0.20 ppbv	0.50	ppbv
Benzene	<0.20 ppbv	0.50	ppbv
Benzyl Chloride	<0.20 ppbv	0.50	ppbv
Bromodichloromethane	<0.20 ppbv	0.50	ppbv
Bromoform	<0.20 ppbv	0.50	ppbv
Bromomethane	<0.20 ppbv	0.50	ppbv
Carbon Disulfide	<0.50 ppbv	0.50	ppbv
Carbon Tetrachloride	<0.20 ppbv	0.50	ppbv
Chlorobenzene	<0.20 ppbv	0.50	ppbv
Chloroethane	<0.20 ppbv	0.50	ppbv
Chloroform	<0.20 ppbv	0.50	ppbv
Chloromethane	<0.20 ppbv	0.50	ppbv
cis-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv



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Richmond, VA 23225 Date Received: June 10, 2016 12:35
Date Issued: June 20, 2016 16:08

Submitted To: Joe France Project Number: 34323.022

Client Site I.D.: Fulton Gas Works Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0457 - No Prep VOC										
Blank (BZF0457-BLK1)										
cis-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Cyclohexane	<0.20 ppbv	0.50	ppbv							
Dichlorodifluoromethane	<0.50 ppbv	0.50	ppbv							
Ethyl acetate	<0.20 ppbv	0.50	ppbv							
Ethylbenzene	<0.20 ppbv	0.50	ppbv							
Heptane	<0.20 ppbv	0.50	ppbv							
Hexane	<0.20 ppbv	0.50	ppbv							
Isopropylbenzene	<0.20 ppbv	0.50	ppbv							
m+p-Xylenes	<0.40 ppbv	1.00	ppbv							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv							
Methylene chloride	<0.50 ppbv	1.00	ppbv							
Methyl-t-butyl ether (MTBE)	<0.20 ppbv	0.50	ppbv							
o-Xylene	<0.20 ppbv	0.50	ppbv							
Propylene	<0.20 ppbv	0.50	ppbv							
Styrene	<0.20 ppbv	0.50	ppbv							
TBA	<0.50 ppbv	0.50	ppbv							
Tetrachloroethylene (PCE)	<0.20 ppbv	0.50	ppbv							
Tetrahydrofuran	<0.20 ppbv	0.50	ppbv							
Toluene	<0.20 ppbv	0.50	ppbv							
trans-1,2-Dichloroethylene	<0.20 ppbv	0.50	ppbv							
trans-1,3-Dichloropropene	<0.20 ppbv	0.50	ppbv							
Trichloroethylene	<0.20 ppbv	0.50	ppbv							
Trichlorofluoromethane	<0.50 ppbv	0.50	ppbv							
Vinyl acetate	<0.20 ppbv	0.50	ppbv							
Vinyl bromide	<0.20 ppbv	0.50	ppbv							
Vinyl chloride	<0.20 ppbv	0.50	ppbv							
Xylenes, Total	<0.60 ppbv	1.50	ppbv							
<i>Sur: 4-Bromofluorobenzene</i>	4.42		ppbv	5.00		88.4	80-120			



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Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 10, 2016 12:35
		Date Issued:	June 20, 2016 16:08
Submitted To:	Joe France	Project Number:	34323.022
Client Site I.D.:	Fulton Gas Works	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Qual	
Batch BZF0457 - No Prep VOC											
LCS (BZF0457-BS1)		Prepared & Analyzed: 06/18/2016									
1,1,1-Trichloroethane	5.63 ppbv	0.5	ppbv	5.00	ppbv	113	70-130				
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv		ppbv		70-130				
1,1,2,2-Tetrachloroethane	5.96 ppbv	0.5	ppbv	5.00	ppbv	119	70-130				
1,1,2-Trichloro-1,2,2-trifluoroethane	4.84 ppbv	0.5	ppbv	5.00	ppbv	96.8	70-130				
1,1,2-Trichloroethane	5.63 ppbv	0.5	ppbv	5.00	ppbv	113	70-130				
1,1-Dichloroethane	5.10 ppbv	0.5	ppbv	5.00	ppbv	102	70-130				
1,1-Dichloroethylene	4.69 ppbv	0.5	ppbv	5.00	ppbv	93.8	70-130				
1,2,4-Trimethylbenzene	6.15 ppbv	0.5	ppbv	5.00	ppbv	123	70-130				
1,2-Dibromoethane (EDB)	5.63 ppbv	0.5	ppbv	5.00	ppbv	113	70-130				
1,2-Dichlorobenzene	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130				
1,2-Dichloroethane	5.30 ppbv	0.5	ppbv	5.00	ppbv	106	70-130				
1,2-Dichloropropane	5.32 ppbv	0.5	ppbv	5.00	ppbv	106	70-130				
1,2-Dichlorotetrafluoroethane	4.39 ppbv	0.5	ppbv	5.00	ppbv	87.8	70-130				
1,3,5-Trimethylbenzene	5.91 ppbv	0.5	ppbv	5.00	ppbv	118	70-130				
1,3-Butadiene	4.32 ppbv	0.5	ppbv	5.00	ppbv	86.4	70-130				
1,3-Dichlorobenzene	4.92 ppbv	0.5	ppbv	5.00	ppbv	98.4	70-130				
1,4-Dichlorobenzene	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130				
1,4-Dioxane	6.36 ppbv	0.5	ppbv	5.00	ppbv	127	70-130				
2-Butanone (MEK)	5.06 ppbv	0.5	ppbv	5.00	ppbv	101	70-130				
4-Methyl-2-pentanone (MIBK)	5.17 ppbv	0.5	ppbv	5.00	ppbv	103	70-130				
Acrolein	<0.20 ppbv	0.50	ppbv		ppbv		70-130				
Allyl chloride	4.81 ppbv	0.5	ppbv	5.00	ppbv	96.2	70-130				
Benzene	5.50 ppbv	0.5	ppbv	5.00	ppbv	110	70-130				
Benzyl Chloride	5.81 ppbv	0.5	ppbv	5.00	ppbv	116	70-130				
Bromodichloromethane	5.08 ppbv	0.5	ppbv	5.00	ppbv	102	70-130				
Bromoform	5.53 ppbv	0.5	ppbv	5.00	ppbv	111	70-130				
Bromomethane	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130				
Carbon Disulfide	4.72 ppbv	0.5	ppbv	5.00	ppbv	94.4	70-130				
Carbon Tetrachloride	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130				
Chlorobenzene	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130				
Chloroethane	5.31 ppbv	0.5	ppbv	5.00	ppbv	106	70-130				
Chloroform	5.36 ppbv	0.5	ppbv	5.00	ppbv	107	70-130				
Chloromethane	4.90 ppbv	0.5	ppbv	5.00	ppbv	98.0	70-130				
cis-1,2-Dichloroethylene	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130				
cis-1,3-Dichloropropene	5.66 ppbv	0.5	ppbv	5.00	ppbv	113	70-130				
Cyclohexane	5.06 ppbv	0.5	ppbv	5.00	ppbv	101	70-130				
Dichlorodifluoromethane	4.79 ppbv	0.5	ppbv	5.00	ppbv	95.8	70-130				



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Certificate of Analysis

Final Report

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Client Name:	France Environmental, Inc. 7834 Forest Hill Ave. Suite 7 Richmond, VA 23225	Date Received:	June 10, 2016 12:35
		Date Issued:	June 20, 2016 16:08
Submitted To:	Joe France	Project Number:	34323.022
Client Site I.D.:	Fulton Gas Works	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD RPD	Limit Qual
Batch BZF0457 - No Prep VOC									
LCS (BZF0457-BS1)		Prepared & Analyzed: 06/18/2016							
Ethyl acetate	3.86 ppbv	0.5	ppbv	5.00	ppbv	77.2	70-130		
Ethylbenzene	5.94 ppbv	0.5	ppbv	5.00	ppbv	119	70-130		
Heptane	5.22 ppbv	0.5	ppbv	5.00	ppbv	104	70-130		
Hexane	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130		
Isopropylbenzene	6.08 ppbv	0.50	ppbv		ppbv		70-130		
m+p-Xylenes	11.9 ppbv	1	ppbv	10.0	ppbv	119	70-130		
Methyl methacrylate	<0.20 ppbv	0.50	ppbv		ppbv		70-130		
Methylene chloride	4.69 ppbv	1.00	ppbv		ppbv		70-130		
Methyl-t-butyl ether (MTBE)	5.04 ppbv	0.5	ppbv	5.00	ppbv	101	70-130		
o-Xylene	6.03 ppbv	0.5	ppbv	5.00	ppbv	121	70-130		
Propylene	3.96 ppbv	0.5	ppbv	5.00	ppbv	79.2	70-130		
Styrene	6.08 ppbv	0.5	ppbv	5.00	ppbv	122	70-130		
TBA	<0.50 ppbv	0.50	ppbv		ppbv		70-130		
Tetrachloroethylene (PCE)	5.50 ppbv	0.5	ppbv	5.00	ppbv	110	70-130		
Tetrahydrofuran	6.14 ppbv	0.5	ppbv	5.00	ppbv	123	70-130		
Toluene	5.74 ppbv	0.5	ppbv	5.00	ppbv	115	70-130		
trans-1,2-Dichloroethylene	4.87 ppbv	0.5	ppbv	5.00	ppbv	97.4	70-130		
trans-1,3-Dichloropropene	5.37 ppbv	0.5	ppbv	5.00	ppbv	107	70-130		
Trichloroethylene	5.39 ppbv	0.5	ppbv	5.00	ppbv	108	70-130		
Trichlorofluoromethane	5.05 ppbv	0.5	ppbv	5.00	ppbv	101	70-130		
Vinyl acetate	4.86 ppbv	0.5	ppbv	5.00	ppbv	97.2	70-130		
Vinyl bromide	4.45 ppbv	0.5	ppbv	5.00	ppbv	89.0	70-130		
Vinyl chloride	4.71 ppbv	0.5	ppbv	5.00	ppbv	94.2	70-130		
Xylenes, Total	17.9 ppbv	1.50	ppbv		ppbv		70-130		
<i>Surr: 4-Bromofluorobenzene</i>	5.36		ppbv	5.00	ppbv	107	70-130		

LCS Dup (BZF0457-BSD1)	Prepared & Analyzed: 06/18/2016								
1,1,1-Trichloroethane	5.71 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	1.41	25
1,1,1,2-Tetrachloroethane	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25
1,1,2,2-Tetrachloroethane	6.00 ppbv	0.5	ppbv	5.00	ppbv	120	70-130	0.669	25
1,1,2-Trichloro-1,2,2-trifluoroethane	4.98 ppbv	0.5	ppbv	5.00	ppbv	99.6	70-130	2.85	25
1,1,2-Trichloroethane	5.65 ppbv	0.5	ppbv	5.00	ppbv	113	70-130	0.355	25
1,1-Dichloroethane	5.18 ppbv	0.5	ppbv	5.00	ppbv	104	70-130	1.56	25
1,1-Dichloroethylene	4.85 ppbv	0.5	ppbv	5.00	ppbv	97.0	70-130	3.35	25
1,2,4-Trimethylbenzene	6.11 ppbv	0.5	ppbv	5.00	ppbv	122	70-130	0.653	25
1,2-Dibromoethane (EDB)	5.57 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.07	25



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Client Site I.D.:	Fulton Gas Works	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting		Units	Spike Level	Source Result	%REC		RPD	RPD Limit	Qual						
	Result	Limit				%REC	Limits									
Batch BZF0457 - No Prep VOC																
LCS Dup (BZF0457-BSD1)																
	Prepared & Analyzed: 06/18/2016															
1,2-Dichlorobenzene	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130	0.840	25							
1,2-Dichloroethane	5.47 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	3.16	25							
1,2-Dichloropropane	5.48 ppbv	0.5	ppbv	5.00	ppbv	110	70-130	2.96	25							
1,2-Dichlortetrafluoroethane	4.83 ppbv	0.5	ppbv	5.00	ppbv	96.6	70-130	9.54	25							
1,3,5-Trimethylbenzene	5.95 ppbv	0.5	ppbv	5.00	ppbv	119	70-130	0.675	25							
1,3-Butadiene	4.48 ppbv	0.5	ppbv	5.00	ppbv	89.6	70-130	3.64	25							
1,3-Dichlorobenzene	4.83 ppbv	0.5	ppbv	5.00	ppbv	96.6	70-130	1.85	25							
1,4-Dichlorobenzene	4.74 ppbv	0.5	ppbv	5.00	ppbv	94.8	70-130	0.840	25							
1,4-Dioxane	6.60 ppbv	0.5	ppbv	5.00	ppbv	132	70-130	3.70	25	L						
2-Butanone (MEK)	5.14 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	1.57	25							
4-Methyl-2-pentanone (MIBK)	5.44 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	5.09	25							
Acrolein	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25							
Allyl chloride	4.57 ppbv	0.5	ppbv	5.00	ppbv	91.4	70-130	5.12	25							
Benzene	5.69 ppbv	0.5	ppbv	5.00	ppbv	114	70-130	3.40	25							
Benzyl Chloride	5.81 ppbv	0.5	ppbv	5.00	ppbv	116	70-130	0.00	25							
Bromodichloromethane	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	2.91	25							
Bromoform	5.43 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	1.82	25							
Bromomethane	4.78 ppbv	0.5	ppbv	5.00	ppbv	95.6	70-130	1.26	25							
Carbon Disulfide	4.91 ppbv	0.5	ppbv	5.00	ppbv	98.2	70-130	3.95	25							
Carbon Tetrachloride	5.47 ppbv	0.5	ppbv	5.00	ppbv	109	70-130	2.97	25							
Chlorobenzene	5.26 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	0.946	25							
Chloroethane	5.07 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	4.62	25							
Chloroform	5.36 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	0.00	25							
Chloromethane	5.57 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	12.8	25							
cis-1,2-Dichloroethylene	5.12 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	2.77	25							
cis-1,3-Dichloropropene	5.74 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	1.40	25							
Cyclohexane	5.27 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	4.07	25							
Dichlorodifluoromethane	5.33 ppbv	0.5	ppbv	5.00	ppbv	107	70-130	10.7	25							
Ethyl acetate	3.87 ppbv	0.5	ppbv	5.00	ppbv	77.4	70-130	0.259	25							
Ethylbenzene	5.94 ppbv	0.5	ppbv	5.00	ppbv	119	70-130	0.00	25							
Heptane	5.27 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	0.953	25							
Hexane	5.23 ppbv	0.5	ppbv	5.00	ppbv	105	70-130	2.71	25							
Isopropylbenzene	6.14 ppbv	0.50	ppbv		ppbv		70-130	0.982	25							
m+p-Xylenes	11.7 ppbv	1	ppbv	10.0	ppbv	117	70-130	1.69	25							
Methyl methacrylate	<0.20 ppbv	0.50	ppbv		ppbv		70-130		25							
Methylene chloride	4.89 ppbv	1.00	ppbv		ppbv		70-130	4.18	25							
Methyl-t-butyl ether (MTBE)	5.09 ppbv	0.5	ppbv	5.00	ppbv	102	70-130	0.987	25							



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Certificate of Analysis

Final Report

Laboratory Order ID 16F0320

Client Name: France Environmental, Inc.
7834 Forest Hill Ave. Suite 7
Richmond, VA 23225 Date Received: June 10, 2016 12:35
Date Issued: June 20, 2016 16:08

Submitted To: Joe France Project Number: 34323.022

Client Site I.D.: Fulton Gas Works Purchase Order:

Volatile Organic Compounds by GCMS - Quality Control

Air Water and Soil Laboratories, Inc.

Analyte	Reporting Result	Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit Limit	Qual Qual
Batch BZF0457 - No Prep VOC										
LCS Dup (BZF0457-BSD1)										
o-Xylene	6.14 ppbv	0.5	ppbv	5.00	ppbv	123	70-130	1.81	25	
Propylene	3.84 ppbv	0.5	ppbv	5.00	ppbv	76.8	70-130	3.08	25	
Styrene	6.01 ppbv	0.5	ppbv	5.00	ppbv	120	70-130	1.16	25	
TBA	<0.50 ppbv	0.50	ppbv		ppbv		70-130		25	
Tetrachloroethylene (PCE)	5.57 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	1.26	25	
Tetrahydrofuran	6.41 ppbv	0.5	ppbv	5.00	ppbv	128	70-130	4.30	25	
Toluene	5.80 ppbv	0.5	ppbv	5.00	ppbv	116	70-130	1.04	25	
trans-1,2-Dichloroethylene	5.05 ppbv	0.5	ppbv	5.00	ppbv	101	70-130	3.63	25	
trans-1,3-Dichloropropene	5.56 ppbv	0.5	ppbv	5.00	ppbv	111	70-130	3.48	25	
Trichloroethylene	5.75 ppbv	0.5	ppbv	5.00	ppbv	115	70-130	6.46	25	
Trichlorofluoromethane	5.17 ppbv	0.5	ppbv	5.00	ppbv	103	70-130	2.35	25	
Vinyl acetate	4.88 ppbv	0.5	ppbv	5.00	ppbv	97.6	70-130	0.411	25	
Vinyl bromide	4.82 ppbv	0.5	ppbv	5.00	ppbv	96.4	70-130	7.98	25	
Vinyl chloride	4.88 ppbv	0.5	ppbv	5.00	ppbv	97.6	70-130	3.55	25	
Xylenes, Total	17.8 ppbv	1.50	ppbv		ppbv		70-130	0.503	25	
<i>Sur: 4-Bromofluorobenzene</i>	5.19		ppbv	5.00	ppbv	104	70-130			



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Client Site I.D.:	Fulton Gas Works	Purchase Order:	

Certified Analytes included in this Report

Analyte	Certifications	Analyte	Certifications
EPA TO-15 in Air			
1,1,1-Trichloroethane	VELAP	Isopropylbenzene	VELAP
1,1,1,2-Tetrachloroethane	VELAP	m+p-Xylenes	VELAP
1,1,2,2-Tetrachloroethane	VELAP	Methyl methacrylate	VELAP
1,1,2-Trichloro-1,2,2-trifluoroethane	VELAP	Methylene chloride	VELAP
1,1,2-Trichloroethane	VELAP	Methyl-t-butyl ether (MTBE)	VELAP
1,1-Dichloroethane	VELAP	o-Xylene	VELAP
1,1-Dichloroethylene	VELAP	Propylene	VELAP
1,2,4-Trimethylbenzene	VELAP	Styrene	VELAP
1,2-Dibromoethane (EDB)	VELAP	TBA	VELAP
1,2-Dichlorobenzene	VELAP	Tetrachloroethylene (PCE)	VELAP
1,2-Dichloroethane	VELAP	Tetrahydrofuran	VELAP
1,2-Dichloropropane	VELAP	Toluene	VELAP
1,2-Dichlortetrafluoroethane	VELAP	trans-1,2-Dichloroethylene	VELAP
1,3,5-Trimethylbenzene	VELAP	trans-1,3-Dichloropropene	VELAP
1,3-Butadiene	VELAP	Trichloroethylene	VELAP
1,3-Dichlorobenzene	VELAP	Trichlorofluoromethane	VELAP
1,4-Dichlorobenzene	VELAP	Vinyl acetate	VELAP
1,4-Dioxane	VELAP	Vinyl bromide	VELAP
2-Butanone (MEK)	VELAP	Vinyl chloride	VELAP
4-Methyl-2-pentanone (MIBK)	VELAP	Xylenes, Total	VELAP
Acrolein	VELAP		
Allyl chloride	VELAP		
Benzene	VELAP		
Benzyl Chloride	VELAP		
Bromodichloromethane	VELAP		
Bromoform	VELAP		
Bromomethane	VELAP		
Carbon Disulfide	VELAP		
Carbon Tetrachloride	VELAP		
Chlorobenzene	VELAP		
Chloroethane	VELAP		
Chloroform	VELAP		
Chloromethane	VELAP		
cis-1,2-Dichloroethylene	VELAP		
cis-1,3-Dichloropropene	VELAP		
Cyclohexane	VELAP		
Dichlorodifluoromethane	VELAP		
Ethyl acetate	VELAP		
Ethylbenzene	VELAP		
Heptane	VELAP		
Hexane	VELAP		



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Submitted To:	Joe France	Project Number:	34323.022
Client Site I.D.:	Fulton Gas Works	Purchase Order:	

Code	Description	Cert Number	Expires
MdDOE	Maryland DE Drinking Water	341	12/31/2016
NC	North Carolina DENR	495	12/31/2016
PADEP	NELAC-Pennsylvania	001	10/31/2016
VELAP Certificate #4337	NELAC-Virginia Certificate #8271	460021	06/15/2017
WVDEP	West Virginia DEP	350	11/30/2016

Qualifiers and Definitions

L	LCS recovery is outside of established acceptance limits
RPD	Relative Percent Difference
Qual	Qualifiers
-RE	Denotes sample was re-analyzed
PF	Preparation Factor
MDL	Method Detection Limit
LOQ	Limit of Quantitation
ppbv	parts per billion by volume
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.



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AIR ANALYSIS
CHAIN OF CUSTODY

of

COMPANY NAME: Timmons Group	INVOICE TO: ^	PROJECT NAME/Quote #:
CONTACT: John Russell	INVOICE CONTACT: ``	SITE NAME: Fulton Gas Works
ADDRESS: 1001 Builders Parkway - Site 300	INVOICE ADDRESS: Richmond, VA	PROJECT NUMBER: 34325.022
PHONE #: 200-6427	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: john.russell@timmons.com	

SAMPLER NAME (PRINT): John T Russell	SAMPLER SIGNATURE:	Turn Around Time: 5 Day(s)
--------------------------------------	--------------------	----------------------------

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other

CLIENT SAMPLE I.D.	Regulator Info		Canister Information				Sampling Start Information				Sampling Stop Information				ANALYSIS Matrix (See Codes)	
	Flow Controller ID	Cal Flow (mL/min)	Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister vacuum (in Hg)	Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	
1) VP-9	N/A	N/A Grab	#16170	1	160526-03	30	/	6/10/16 10:12	10:12	/	72°	6/10/16	10:23	/	72°	T015
2)																
3)																
4)																

RELINQUISHED:	DATE / TIME: 6-10-16 12:35	RECEIVED:	DATE / TIME: 6/10/16 12:35	QC Data Package	LAB USE ONLY	FEI: 16F0320
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level I <input type="checkbox"/>		
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level II <input type="checkbox"/>		
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level III <input type="checkbox"/>		
RELINQUISHED:	DATE / TIME:	RECEIVED:	DATE / TIME:	Level IV <input type="checkbox"/>		



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Sample Conditions Checklist

Opened by: (Initials)

BL

Lab ID No.:

16F0320

Date Cooler Opened:

06/10/16

YES NO N/A

1. How were samples received?

Fed Ex
UPS
Courier
Walk In

2. Were custody seals used?

3. If yes, are custody seals unbroken and intact at the date and time of arrival?

4. Are the custody papers filled out completely and correctly?

5. Do all bottle labels agree with custody papers?

7. Is the temperature blank or representative sample within acceptable limits?
(above freezing to 6°C)

BL
06/10/16

8. If NO, are the samples just taken and received on ice?

9. Are all samples within holding time for requested laboratory tests?

10. Is a sufficient amount of sample provided to perform the tests indicated?

11. Are all samples in proper containers for the analyses requested?

12. Are all samples appropriately preserved for the analyses requested?

13. Are all volatile organic containers free of headspace?

14. Are all TOX containers free of headspace?

15. Is Trip blank provided with each VOC sample set? Circle applicable method:
(Document if trip blank is not received with the sample set)

EPA 8011 EPA 504 EPA 8260 EPA 624

RSK-175 EPA 8015 (GRO) EPA 8021

EPA 524 *GRO Wisconsin DNR (water and/or methanol trip blank must be provided)

* See preservation log for Wisconsin soil DRO.

COMMENTS

Per Joe France and John Russell work order logged with client: France Environmental. BL 06/10/16

FOR LAB USE ONLY:

CrVI preserved date/time: _____

Buffer Sol'n ID: _____

Analyst initials: _____

1N NaOH ID: _____ or

5N NaOH ID: _____

THIS DOCUMENT IS UNCONTROLLED WHEN PRINTED
F1302 Sample Condition 6_0.xls



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Client Site I.D.:	Fulton Gas Works	Purchase Order:	

Sample Conditions Checklist

Samples Received at:	24.10°C
How were samples received?	Walk In
Were Custody Seals used? If so, were they received intact?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits? (above freezing to 6°C) or received on ice and recently taken?	No
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved . Note that metals containers do not require field preservation but lab preservation may delay analysis.	Yes

APPENDIX 4

Isoconcentration Maps

