

Environmental Consulting Services

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August 17, 2016

Timmons Group

1001 Boulders Parkway Suite 300 Richmond, Virginia 23225

- ATTN: Mr. John T. Russell, AIPG CPG Senior Environmental Project Manager
- RE: Lead-Based Paint Inspection Report City of Richmond Former Fulton Gas Works **Building #1** Peebles Street Richmond, Virginia FEI Project Number: FEI-16AL243



View of Building #1

Dear Mr. Russell:

France Environmental, Inc. (FEI) is presenting you with the Lead Survey Report for the lead inspection recently completed at the Former Fulton Gas Works – Building #1. The results of this testing, conducted on June 3, 2016 can be found in the accompanying report.

We appreciate this opportunity to provide professional services for this project. If we can be of further assistance or if you have any questions concerning this report, please do not hesitate to call.

Respectfully submitted,

FRANCE ENVIRONMENTAL, INC.

Andrew Baird

Andrew H. Baird Lead Inspector

andrew S. Richmond

Andrew S. Richmond Project Manager

Enclosures

LEAD-BASED PAINT SURVEY REPORT

CONDUCTED AT:

FORMER FULTON GAS WORKS BUILDING #1 PEEBLES STREET RICHMOND, VIRGINIA

PREPARED FOR:

TIMMONS GROUP 1001 BOULDERS PARKWAY SUITE 300 RICHMOND, VIRGINIA 23225

PREPARED BY:

FRANCE ENVIRONMENTAL, INC. 7834 FOREST HILL AVENUE SUITE 7 RICHMOND, VIRGINIA 23225 (804) 716.0560 (PHONE) (804) 918.7098 (FAX)

FEI PROJECT NO. FEI-16AL243

AUGUST 17, 2016

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GLOSSARY OF TERMS

1.0 SUMMARY

Timmons Group retained France Environmental, Inc. (FEI) to conduct a comprehensive leadbased paint sampling survey of the Building #1 located at the Former Fulton Gas Works located on Peebles Street in Richmond, Virginia. A summary of findings is contained in the following paragraph(s).

XRF test results indicated that lead is present above 1.0 mg/cm² on the following painted building components:

EXTERIOR

- Pink Wood Window Casing
- Gray Metal Downspout
- Yellow Metal Window Sash

INTERIOR

- Orange Metal Raised Platform
- Black Metal Panel
- Yellow Metal Hand Rail
- Cream Brick Wall

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

A list of all components testing positive for lead can be found in Table I. A complete summary of all XRF test results is included in Appendix A of this report.

2.0 INTRODUCTION

2.1 GENERAL INFORMATION

The building for which this testing was performed is the Former Fulton Gas Works Building #1 in Richmond, Virginia. The building is a two and a half story structure. Various interior and exterior painted building components are included in this lead survey.

The building was constructed prior to 1978. In 1978, the Consumer Product Safety Commission banned the sale of lead-based paint to consumers, and its application to areas where consumers have direct access to painted surfaces. As a result of this ban, buildings painted prior to 1978 are suspected of containing lead paint.

This report has been prepared for the exclusive use of Timmons Group for the Former Fulton Gas Works Building #1 property located at Peebles Street in Richmond, Virginia. It is not intended for the use or benefit of any other party.

2.2 AUTHORIZATION

Authorization to perform this testing was given by receipt of a signed copy of FEI Proposal Number FEI-16124 dated May 25, 2016. Mr. John T. Russell, AIPG CPG, Senior Environmental Project Manager with TIMMONS GROUP signed the proposal for the Client. Access to the building was provided to FEI by the TIMMONS GROUP. The building was vacant at the time of the inspection.

2.3 PURPOSE

The purpose of the lead-based paint testing was to identify painted surfaces or other surface coatings that contain lead in excess of 1.0 mg/cm² by XRF testing or 0.5% by weight (5000 ppm) by laboratory analysis.

The information provided in this report may be used by Timmons Group to make decisions regarding lead-based paint management and abatement strategies or the need for additional testing.

2.4 WARRANTY

The information contained in this report is based upon the data furnished by Timmons Group and observations and test results provided by FEI. These observations and results are time dependent, are subject to changing site conditions, and revisions to Federal, state, and local regulations.

FEI warrants that these findings have been promulgated after being prepared in accordance with generally accepted practices in the lead-based paint testing industry. No other warranties are implied or expressed.

FEI also recognizes that raw XRF and laboratory test data are usually not sufficient to make all abatement and management decisions and recommends that FEI be afforded an opportunity to review abatement specifications so test results may be properly interpreted and implemented.

3.0 SCOPE OF SERVICES

The scope of services for this project included an interview with Client contacts to determine the approximate construction date and painting history of the building and areas to be tested, the performance of field and laboratory testing programs, and the preparation of a report detailing where and at what concentrations lead was found.

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

XRF testing of interior components was performed on randomly selected painted, stained, and/or varnished surfaces in general accordance with the U.S. Department of Housing and Urban Development's (HUD) <u>Guidelines for the Evaluation and Control of Lead-Based Paint</u> <u>Hazards in Housing</u>, Chapter 7: Lead-Based Paint Inspection, 2012 Edition.

Prior to conducting the lead-based paint testing, TIMMONS GROUP was advised that a number of paint samples and substrate readings may have to be obtained which would require the removal of paint-chip samples from painted surfaces. Paint-chip sampling is generally required when an irregular or unusually small surface is encountered which cannot be assayed with an XRF device or when initial XRF test values are inconclusive. If conducted, an effort would have been made to collect bulk samples from inconspicuous or damaged locations where possible, but restoration of sampled surfaces would have not been within the scope of this survey. *Paint-chip sampling was not required for this project as no inconclusive values were obtained.*

4.0 METHODOLOGY

4.1 FIELD SURVEY - GENERAL

XRF field-testing was performed with the LPA-1, manufactured by Radiation Monitoring Devices (RMD). The use of a portable, non-destructive testing device is advantageous when numerous tests must be performed because of its brief testing time and relatively low cost compared to laboratory methods.

XRF test data, including calibration checks against standards, and confirmation paint-chip samples were recorded on inspection worksheet(s) to generate a permanent record of the field findings. XRF test data stored in a data logger can also be used to generate the final report.

Field chain-of-custody forms are completed for the bulk paint-chip samples at the point of collection and a copy is maintained in the shipping office. Confirmation samples, if collected, were shipped to a National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory for analysis by Flame Atomic Absorption Spectroscopy (FAAS) or Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES).

4.2 XRF TESTING

XRF values are collected by placing the scanner on the test surface and exposing the lead paint film to gamma radiation. XRF analyzers are usually capable of penetrating up to 25 layers of paint to determine lead content. At the conclusion of each test, the shutter is closed and the display on the control console shows the lead concentration in mg/cm² for manual tabulation, or in some cases, store sampling information in sequence in a data logger, which can be transferred to a computer for sorting and report generation.

4.3 INTERPRETATION OF XRF RESULTS - SPECTRUM ANALYZER

XRF results are identified as positive, negative, or inconclusive based on Performance Characteristic Sheets (PCS), developed by HUD and EPA for each model of XRF device that is commercially available.

"Positive" refers to XRF results greater than or equal to the threshold.

"Negative" refers to XRF results less than the threshold.

The Federal Guidelines recommend classifying XRF results to the 1.0 mg/cm² standard whenever possible. If states or local jurisdictions adopt standards that differ from the Federal Guideline, the most stringent rules are applied.

For this project:

"**Positive**" refers to XRF results greater than or equal to (1.0 mg/cm²)

"Negative" refers to XRF results less than (1.0 mg/cm²)

4.4 REPORT FORMAT

Spreadsheets containing a compilation of XRF sampling results by building component for tested areas are included in Appendix A of this report. Individual test spots are listed in the spreadsheets, including but not limited to a unique sample number, color and paint condition, substrate type, a description of the building component, location, positive quantity, lab result, quick mode, and the test value in mg/cm². Summary data listing all components testing positive for lead-based paint according to HUD Guidelines are listed in Table(s) I.

The Sample Location Drawings will show where components were tested for lead-based paint. The numbered XRF test spots are presented in Appendix B of this report.

4.5 CONFIRMATION LABORATORY SAMPLES

The collection of paint-chip samples is required when initial XRF test values are inconclusive or when an irregular or unusually small surface was encountered which cannot be assayed with an XRF device. When technically feasible, paint films with pre-existing damage or visually obscured surfaces would be selected for paint-chip sample collection. Floors, furniture, and adjacent areas would be protected during the sampling process and visible debris would be removed after sampling was completed.

An area of approximately two square inches is extracted from painted components down to but not including the substrate. Paint-chip samples would be placed in a sealed container, labeled, and shipped to an approved laboratory for analysis. Restoration and repainting of sampled surfaces is not within the scope of FEI's lead inspection protocol.

Paint samples would have been subjected to acid digestion in the laboratory and analysis by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) or Flame Atomic Absorption Spectrophotometry (FAAS). Laboratory test results of 0.5% by weight or greater are considered positive. **Paint-chip sampling was not required for this project as no inconclusive values were obtained.**

5.0 FINDINGS

XRF values taken from painted building components indicated lead is present above the HUD established action level of 1.0 mg/cm² for lead on the following painted components:

EXTERIOR

- Pink Wood Window Casing
- Gray Metal Downspout
- Yellow Metal Window Sash

INTERIOR

- Orange Metal Raised Platform
- Black Metal Panel
- Yellow Metal Hand Rail
- Cream Brick Wall

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

Refer to Table I for a summary of specific locations of components testing positive for leadbased paint. Area data sheets providing XRF results for all components tested can be found in Appendix A. Paint-chip sampling was not required for this project as no inconclusive values were obtained.

Although limited positive XRF values were detected at the building during the field inspection, TIMMONS GROUP should recognize that paint films usually have varying amounts of lead on what appears to be a homogeneous painted area.

Federal Occupational Safety Health Administration (OSHA) regulations do not include a specific level at which lead in paint is considered hazardous. The OSHA Lead in Construction standard (29 CFR 1926.62) requires that employers take certain actions when workers conduct work that results in disturbing paint containing any measurable concentration of lead.

This report should be read in its entirety, including detailed information, which is contained in other sections and appendices.

5.1 SUMMARY DATA TABLE(S)

TABLE I LBP SURVEY AREA SUMMARY DATA SHEET FORMER FULTON GAS WORKS – BUILDING #1 PEEBLE STREET RICHMOND, VIRGINIA

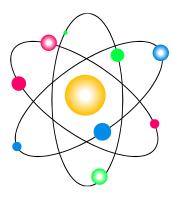
The following list of building components tested positive for lead-based paint:

XRF <u>Sample :</u>	Building <u># Component</u>	Paint <u>Color</u>	Sample Location	<u>Substrate</u>	Surface <u>Cond.</u>	Lead <u>mg/cm²</u>
Exterio	<u>.</u>					
4	Window Casing	Pink	Exterior – Side of Building	w	N/80	>9.9
5	Downspout	Gray	Exterior – Side of Building	м	N/80	7.8
8	Window Sash	Yellow	Exterior – Side of Building	м	N/60	2.8
Interior						
14	Raised Platform	Orange	Interior – Open Room 1	м	N/60	9.7
22	Panel	Black	Interior – Switch Gear Room	М	I	1.4
25	Handrail	Yellow	Interior - Mechanical Room	м	N/20	1.2
26	Wall	Cream	Interior – Mechanical Room	В	N/10	3.1

APPENDICES

APPENDIX A. - XRF TEST RESULTS APPENDIX B. - SAMPLE LOCATION DRAWINGS APPENDIX C. - LEAD INSPECTOR'S LICENSE(S)

APPENDIX A.



XRF TEST RESULTS

LEAD-BASED PAINT SAMPLE DATA SHEET

Area Name:	Building #1
Unit Address:	Former Fulton Gas Works
	Peebles Street
	Richmond, Virginia
Project No	FEI-16AL243

Operator:Andrew BairdRecorder:Andrew BairdRMD Model:LPA-1Serial No.:2610Inspection Date:06/3/16

						rial No.: 2610 I. Block Value: 1.0 mg/cm	
	1 st	2 nd	3 rd	Avg.	Diff. between Avg. and Cal. Block		
Entry	1.0	1.0	1.0	1.0	0.0		
Exit	1.0	1.0	1.0	1.0	0.0		

Key:

M=metal W=wood G=gypsum P=plaster PC=poured concrete RM=roofing material WP=wood panel C=concrete T=tile B=brick D=drywall CB=concrete block ST=stucco I=Indicates surface is intact N=NON-intact in (%) increments (Deteriorated Paint)

Sample #	Building Component	Paint Color	Sample Location	Sub Type	Surf Cond.	Quick (mg/cm ²)	Pos. Quantity (No. or SF)
1	Door	Gray	Exterior – Garage Door	М	I	-0.2	
2	Door Frame	White	Exterior – Garage Door	М	N/16	0.1	
3	Wall	Silver	Exterior – Front of Bldg – Graffiti	В	I	0.0	
4	Window Casing	Pink	Exterior – Side of Building	w	N/80	>9.9	
5	Downspout	Gray	Exterior – Side of Building	М	N/80	7.8	
6	Door	Lt Blue	Exterior – Side of Building	W	N/60	-0.1	
7	Door Frame	Lt Blue	Exterior – Side of Building	W	N/60	0.2	
8	Window Sash	Yellow	Exterior – Side of Building	м	N/60	2.8	
9	Door	White	Exterior – Back of Building	М	I	-0.2	
10	Door Frame	Lt Blue	Exterior – Back of Building	W	N/80	-0.2	
11	Wall	Cream	Interior – Open Room 1	В	N/10	-0.4	
12	I-Beam	Cream	Interior – Open Room 1	М	N/80	-0.4	
13	Raised Platform	Cream	Interior – Open Room 1	М	N/10	-0.1	
14	Raised Platform	Orange	Interior – Open Room 1	М	N/60	9.7	
15	Duct	Gray	Interior – Open Room 1	М	N/10	-0.2	
16	Ceiling I-Beam	Green	Interior – Open Room 1	М	N/30	-0.1	
17	Duct	Red	Interior – Open Room 1	М	I	-0.2	
18	Duct	Silver	Interior – Open Room 1	М	I	0.3	
19	Wall	Silver	Interior – Open Room 1	В	I	-0.2	
20	Motor	Blue	Interior – Open Room 1	М	N/20	0.0	
21	Wheel	Red	Interior – Open Room 1	М	N/30	-0.2	
22	Panel	Black	Interior – Switch Gear Room	м	I	1.4	
23	Wall	Green	Interior – Room Next to Switch Gear B Room		N/60	0.7	
24	Wall	White	Interior – Room Next to Switch Gear Room	В	N/60	-0.1	
25	Handrail	Yellow	Interior - Mechanical Room	м	N/20	1.2	

For an explanation of the XRF Quick value parameters see the LBP Survey Methodology Section of this Report.

LEAD-BASED PAINT SAMPLE DATA SHEET

Area Name:	Building #1
Unit Address:	Former Fulton Gas Works
	Peebles Street
	Richmond, Virginia
Project No	FEI-16AL243

Key:

- M=metal W=wood G=gypsum P=plaster PC=poured concrete RM=roofing material
- C=concrete T=tile B=brick D=drywall CB=concrete block ST=stucco

Operator:	Andrew Baird
Recorder:	Andrew Baird
RMD Model:	LPA-1
Serial No.:	2610
Inspection Date:	06/3/16

I=Indicates surface is intact N=NON-intact in (%) increments (Deteriorated Paint)

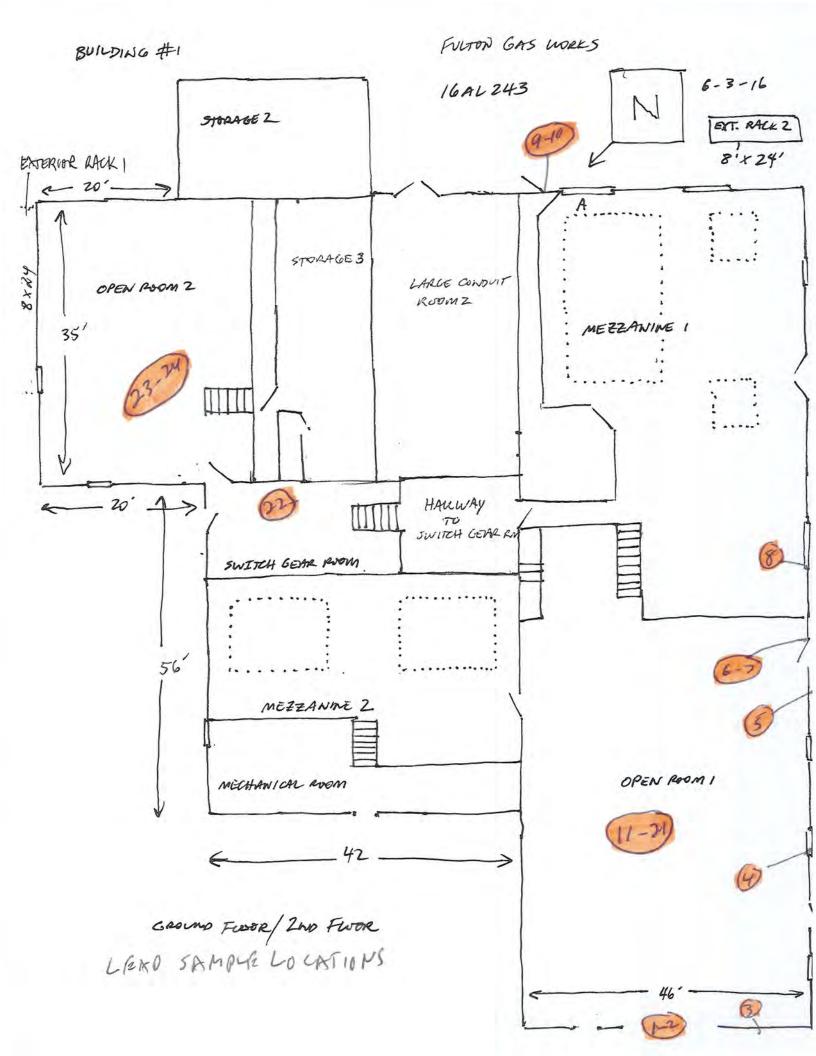
Sample #	Building Component	Paint Color	Sample Location	Sub Type	Surf Cond.	Quick (mg/cm ²)	Pos. Quantity (No. or SF)
26	Wall	Cream	Interior – Mechanical Room	В	N/10	3.1	
27	Platform	Cream	Interior – Mechanical Room	С	N/20	0.4	
28	Wheel	Red	Interior – Mechanical Room	М	N/20	0.4	
29	Motor	Blue	Interior – Mechanical Room	М	N/20	-0.3	

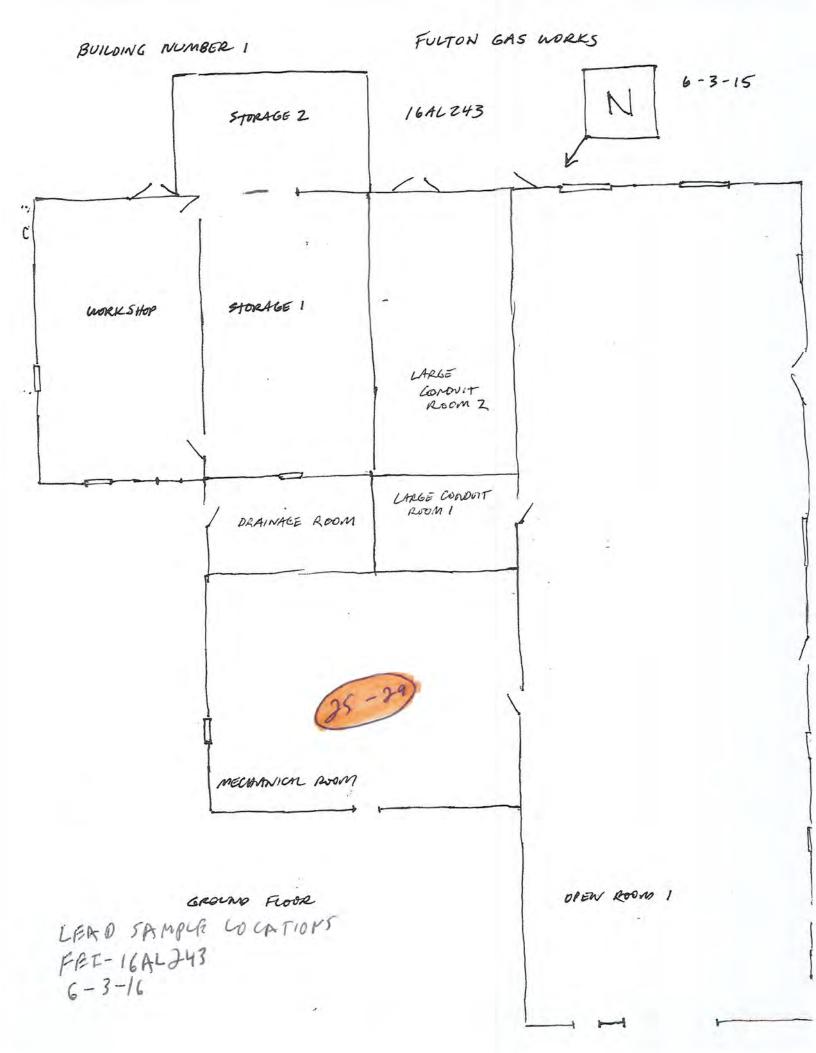
For an explanation of the XRF Quick value parameters see the LBP Survey Methodology Section of this Report.

APPENDIX B.

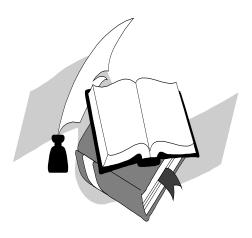


SAMPLE LOCATION DRAWINGS

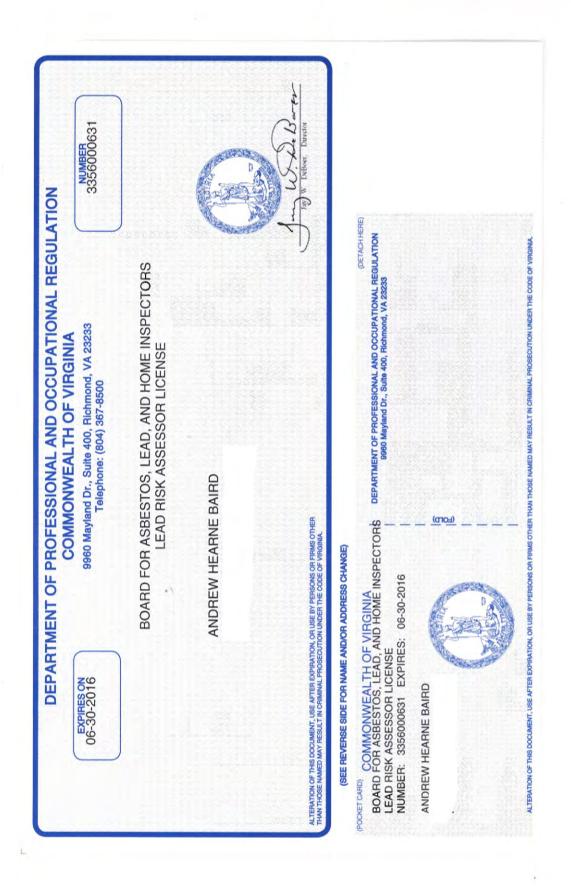




APPENDIX C.



PERSONNEL CERTIFICATIONS/LICENSE



GLOSSARY OF TERMS

Abatement - a comprehensive process of eliminating exposure or potential exposure to lead paint and lead-containing soil and dust which must include testing, measures for worker protection, containment of dust and debris, cleanup and disposal of waste, and clearance testing.

Action Level - the point at which something needs to be done to correct or eliminate the presence of the hazard (e.g. lead).

Acute Effect - severe or immediate reaction, usually to a single large exposure.

Administrative Removal - is the temporary removal of workers prior to their reaching blood lead levels requiring medical removal in order to provide additional protection to both workers and employers.

Apparent Lead Concentration (ALC) - for direct reading XRF's, is the average of at leas 3 XRF single cycle readings on a <u>painted</u> surface. For spectrum analyzers, the ALC is a single reading.

Atomic Absorption - is a method of measuring elements such as lead. The lead is vaporized at high temperature, usually several thousand degrees, and light of a very specific wavelength is shined through the vapor.

Biological Monitoring - is the analysis of person's blood and/or urine, to determine the level of a contaminant, such as lead, in the body.

Blank - a non-exposed sample of the medium used for testing, such as wipe or filter, which is analyzed like other samples to determine whether (1) samples are contaminated with lead before samples are collected (e.g., at the factory, or at the testing site), (2) the samples are contaminated after sample collection (e.g., during transportation to the laboratory or in the laboratory).

CFR - The Code of Federal Regulations - a codification of the regulations of the various Federal Agencies.

Characteristics - EPA has identified four characteristics of a hazardous waste: Ignitability; Corrosivity; Reactivity; and Toxicity. Any solid waste that exhibits one or more of these characteristics is classified as a hazardous waste under RCRA.

Chelation Therapy - the medical treatment in which a drug that is attracted to metals (such as lead) is infused into a patient's vein. The drug binds to the metal in the blood, and both are excreted by the kidney in urine.

Chronic Effect - a response to exposure, which may take days, months or years to develop.

Corrected Lead Concentrations (CLC) - the difference between the Apparent Lead Concentration (ALC) and the Substrate Equivalent Lead Concentration (SEL).

Common Area - a room or area that is accessible to all residents in a multi-family building (e.g., hallway, laundry room).

Containment - is a process for protecting the environment by controlling exposures to lead dust and debris created during abatement.

Detection Limit - the minimum amount of a component that a method can reliably measure.

Direct Reading XRF - is an X-Ray Fluorescence analyzer which provides the operator with a display of an estimated lead concentration, usually calculated from the lead "K" x-ray intensity, but sometimes from the "L" x-ray intensity.

dl - stands for "deciliter." The prefix "deci-" means "one-tenth." One deciliter is roughly the same as about one tenth of a quart, or about 3.4 fluid ounces.

Dwelling Unit - refers to the room or group of rooms within residential premises used or intended for use by one family or household for living, sleeping, cooking and eating. "Dwelling Unit" includes a condominium.

Encapsulation - involves resurfacing or covering surfaces, and sealing or caulking with durable materials, so as to prevent or control chalking, flaking lead-containing substances from becoming part of house dust or accessible to children. Painting or wallpapering is not considered to be encapsulation.

Engineering Controls - are measures implemented at the work site to contain, control and/or otherwise reduce worker exposure to, and environmental releases of, lead dust and debris.

EPA Identification Number - the unique number assigned by EPA to each generator or transporter of hazardous waste, and each treatment, storage, or disposal facility.

Final Inspection - inspection by a qualified inspector, industrial hygienist, or local public health official to determine whether abatement and cleanup are complete.

Generator - any entity who first creates a hazardous waste or any person who first makes the waste subject to the Subtitle C regulation (e.g., imports a hazardous waste, initiates a shipment of a hazardous waste from a TSD, or mixes hazardous wastes of different DOT shipping descriptions by placing them into a single container).

High Efficiency Particle Air Filter or (HEPA) - means a filter capable of filtering out particles of 0.3 microns or greater from a body of air at 99.97% efficiency or greater.

High Phosphate Detergent - detergent that contains at least 5% trisodium phosphate (TSP).

In-place Management - a series of recurrent actions to reduce the lead hazard until such time as abatement can be carried out. Usually involves paint stabilization and regular cleaning of the premises.

Intact Surface - refers to a surface with no loose paint.

Landfill - a disposal facility or part of a facility where solid or hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

Logbook - a notebook that accompanies each XRF analyzer, to record such information as daily performance, maintenance problems, and average reading time.

Manifest - the shipping document, EPA form 8700-22, used for identifying the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of treatment, storage, or disposal.

Medical Removal - the temporary removal of workers due to elevated blood levels as defined in the OSHA Lead Standard.

Micrograms - one millionth of a gram: The prefix "micro-" means "1/1,000,000 of" (one millionth of). Since there are 453 grams in one pound and 16 ounces in one pound, one gram equals 0.035 ounces. A microgram is equal to about 35/1,000,000,000 (thirty-five billionths) of an ounce.

Off-Site Paint Removal - the removal of paint at a site away from the abatement project such as the stripping of lead paint from the surface of a component at the facilities of a commercial paint-stripping operation occurring in chemical tanks.

On-Site Paint Removal - the removal of lead-based paint down to the bare substrate usually through heat, chemical or mechanical means. The affected component remains in-place on the premises during this removal process.

Personal Samples (for sampling lead dust) - air samples collected from within the breathing zone of a worker, but outside the respirator.

Pigments - are chemicals, which have color, or properties, which affect color.

ppm - stands for "parts per million," meaning the weight of one part per weight of the total amount of material. For example, a lead concentration of 1 ppm expresses the ratio of one gram of lead dissolved into one million (1,000,000) grams of water.

Precision - the degree of variation in a series of successive measurements of the same phenomenon. Commonly measured by standard deviation.

Public Housing Agency (PHA) - any State, county, municipality, or other governmental entity or public body (or agency or instrumentality thereof) which is authorized to engage or assist in the development or operation of housing for low-income families.

Random Testing - the process of performing an initial survey in a representative sampling of units in a project.

Resource Conservation and Recovery Act (RCRA) of 1976 - what we commonly refer to as RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA was amended in 1980 and most recently on November 8, 1984 by the Hazardous and Solid Waste Amendments.

Replacement - is strategies of abatement, which entails the removal of components such as windows, doors, and trim that have lead painted surfaces and installing new components free of lead paint.

Substrate Equivalent Lead Concentration (SEL) - for a direct reading XRF, the average of at least 3 XRF single cycle readings on an <u>unpainted</u> surface. For a spectrum analyzer, the difference between the instruments reading on a standard or reference material placed on the bare substrate and the known lead level in the standard.

Small Quantity Generator - as defined by EPA, a generator who produces less than 100 kg of hazardous waste per month (or accumulates less than 100 kg at any one time) or one who produces less than 1 kg of acutely hazardous waste per month (or accumulates less than 1 kg of acutely hazardous waste per month (or accumulates less than 1 kg of acutely hazardous waste at any one time). State definitions of Small Quantity Generator may vary.

Spectrum Analyzer XRF - is a type of XRF analyzer, which provides the operator with a plot of the energy and intensity of both "K" and "L" x-rays, as well as a calculated lead concentration.

Storage - the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed or, or stored elsewhere.

Substrate - a surface upon which paint or varnish has been or may be applied. Examples of substrates include wood, plaster, metal, and drywall. Substrates may contain lead absorbed from paint or from other sources.

Substrate Effect - the returning of backscattered radiation from the paint, substrate or underlying material to the XRF analyzer. This radiation when counted as lead x-rays by an XRF contributes to SEL or bias. The inspector may have to compensate for this effect when using direct reading XRF analyzers.

Toxicity Characteristic Leaching Procedure (TCLP) - is one of the tests for the determinations of whether a solid waste is classified as a hazardous substance.

Transporter - any person engaged in the off-site transportation of hazardous waste within the United States, by air, rail, highway, or water, if such transportation requires a manifest under 40 CFR Part 262.

Treatment - any method, technique or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize it, or render it non-hazardous or less hazardous, or to recover it, make it safer to transport, store or dispose of, or amenable for recovery, storage, or volume reduction.

TSD - acronym for treatment, storage, or disposal hazardous waste facility.

TSP - acronym for trisodium phosphate.

XRF Analyzer - an instrument, which estimates lead concentration in milligrams per square centimeter (mg/cm²) using the principal of x-ray fluorescent ("XRF"). Two (2) types of XRF analyzers are used, direct readers and spectrum analyzers; the underlying principles are the same.



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View of Building #2

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We appreciate this opportunity to provide professional services for this project. If we can be of further assistance or if you have any questions concerning this report, please do not hesitate to call.

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LEAD-BASED PAINT SURVEY REPORT

CONDUCTED AT:

FORMER FULTON GAS WORKS BUILDING #2 PEEBLES STREET RICHMOND, VIRGINIA

PREPARED FOR:

TIMMONS GROUP 1001 BOULDERS PARKWAY SUITE 300 RICHMOND, VIRGINIA 23225

PREPARED BY:

FRANCE ENVIRONMENTAL, INC. 7834 FOREST HILL AVENUE SUITE 7 RICHMOND, VIRGINIA 23225 (804) 716.0560 (PHONE) (804) 918.7098 (FAX)

FEI PROJECT NO. FEI-16AL243

AUGUST 17, 2016

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GLOSSARY OF TERMS

1.0 SUMMARY

TIMMONS GROUP retained France Environmental, Inc. (FEI) to conduct a comprehensive lead-based paint sampling survey of Building #2 at the Former Fulton Gas Works, located on Peebles Street in Richmond, Virginia. A summary of findings is contained in the following paragraph(s).

XRF test results indicated that lead is present above 1.0 mg/cm² on the following painted building components:

EXTERIOR

- Green Metal Pipe
- Green Metal Ladder
- Yellow Metal Post

INTERIOR

- Black Metal Panel
- Red Metal I-Beam

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

A list of all components testing positive for lead can be found in Table I. A complete summary of all XRF test results is included in Appendix A of this report.

2.0 INTRODUCTION

2.1 GENERAL INFORMATION

The building for which this testing was performed is the Former Fulton Gas Works - Building #2 in Richmond, Virginia. The building is a one story structure. Various interior and exterior painted building components are included in this lead survey.

The building was constructed prior to 1978. In 1978, the Consumer Product Safety Commission banned the sale of lead-based paint to consumers, and its application to areas where consumers have direct access to painted surfaces. As a result of this ban, buildings painted prior to 1978 are suspected of containing lead paint.

This report has been prepared for the exclusive use of TIMMONS GROUP for the Former Fulton Gas Works - Building #2 property located at Peebles Street in Richmond, Virginia. It is not intended for the use or benefit of any other party.

2.2 AUTHORIZATION

Authorization to perform this testing was given by receipt of a signed copy of FEI Proposal Number FEI-16124 dated May 25, 2016. Mr. John T. Russell, AIPG CPG, Senior Environmental Project Manager with TIMMONS GROUP signed the proposal for the client. Access to the building was provided to FEI by the TIMMONS GROUP. The building was vacant at the time of the inspection.

2.3 PURPOSE

The purpose of the lead-based paint testing was to identify painted surfaces or other surface coatings that contain lead in excess of 1.0 mg/cm² by XRF testing or 0.5% by weight (5000 ppm) by laboratory analysis.

The information provided in this report may be used by TIMMONS GROUP to make decisions regarding lead-based paint management and abatement strategies or the need for additional testing.

2.4 WARRANTY

The information contained in this report is based upon the data furnished by TIMMONS GROUP and observations and test results provided by FEI. These observations and results are time dependent, are subject to changing site conditions, and revisions to Federal, state, and local regulations.

FEI warrants that these findings have been promulgated after being prepared in accordance with generally accepted practices in the lead-based paint testing industry. No other warranties are implied or expressed.

FEI also recognizes that raw XRF and laboratory test data are usually not sufficient to make all abatement and management decisions and recommends that FEI be afforded an opportunity to review abatement specifications so test results may be properly interpreted and implemented.

3.0 SCOPE OF SERVICES

The scope of services for this project included an interview with Client contacts to determine the approximate construction date and painting history of the building and areas to be tested, the performance of field and laboratory testing programs, and the preparation of a report detailing where and at what concentrations lead was found.

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

XRF testing of interior components was performed on randomly selected painted, stained, and/or varnished surfaces in general accordance with the U.S. Department of Housing and Urban Development's (HUD) <u>Guidelines for the Evaluation and Control of Lead-Based Paint</u> <u>Hazards in Housing</u>, Chapter 7: Lead-Based Paint Inspection, 2012 Edition.

Prior to conducting the lead-based paint testing, TIMMONS GROUP was advised that a number of paint samples and substrate readings may have to be obtained which would require the removal of paint-chip samples from painted surfaces. Paint-chip sampling is generally required when an irregular or unusually small surface is encountered which cannot be assayed with an XRF device or when initial XRF test values are inconclusive. If conducted, an effort would have been made to collect bulk samples from inconspicuous or damaged locations where possible, but restoration of sampled surfaces would have not been within the scope of this survey. *Paint-chip sampling was not required for this project as no inconclusive values were obtained.*

4.0 METHODOLOGY

4.1 FIELD SURVEY - GENERAL

XRF field-testing was performed with the LPA-1, manufactured by Radiation Monitoring Devices (RMD). The use of a portable, non-destructive testing device is advantageous when numerous tests must be performed because of its brief testing time and relatively low cost compared to laboratory methods.

XRF test data, including calibration checks against standards, and confirmation paint-chip samples were recorded on inspection worksheet(s) to generate a permanent record of the field findings. XRF test data stored in a data logger can also be used to generate the final report.

Field chain-of-custody forms are completed for the bulk paint-chip samples at the point of collection and a copy is maintained in the shipping office. Confirmation samples, if collected, were shipped to a National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory for analysis by Flame Atomic Absorption Spectroscopy (FAAS) or Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES).

4.2 XRF TESTING

XRF values are collected by placing the scanner on the test surface and exposing the lead paint film to gamma radiation. XRF analyzers are usually capable of penetrating up to 25 layers of paint to determine lead content. At the conclusion of each test, the shutter is closed and the display on the control console shows the lead concentration in mg/cm² for manual tabulation, or in some cases, store sampling information in sequence in a data logger, which can be transferred to a computer for sorting and report generation.

4.3 INTERPRETATION OF XRF RESULTS - SPECTRUM ANALYZER

XRF results are identified as positive, negative, or inconclusive based on Performance Characteristic Sheets (PCS), developed by HUD and EPA for each model of XRF device that is commercially available.

"Positive" refers to XRF results greater than or equal to the threshold.

"Negative" refers to XRF results less than the threshold.

The Federal Guidelines recommend classifying XRF results to the 1.0 mg/cm² standard whenever possible. If states or local jurisdictions adopt standards that differ from the Federal Guideline, the most stringent rules are applied.

For this project:

"**Positive**" refers to XRF results greater than or equal to (1.0 mg/cm²)

"Negative" refers to XRF results less than (1.0 mg/cm²)

4.4 REPORT FORMAT

Spreadsheets containing a compilation of XRF sampling results by building component for tested areas are included in Appendix A of this report. Individual test spots are listed in the spreadsheets, including but not limited to a unique sample number, color and paint condition, substrate type, a description of the building component, location, positive quantity, lab result, quick mode, and the test value in mg/cm². Summary data listing all components testing positive for lead-based paint according to HUD Guidelines are listed in Table(s) I.

The Sample Location Drawing will show where components were tested for lead-based paint. The numbered XRF test spots are presented in Appendix B of this report.

4.5 CONFIRMATION LABORATORY SAMPLES

The collection of paint-chip samples is required when initial XRF test values are inconclusive or when an irregular or unusually small surface was encountered which cannot be assayed with an XRF device. When technically feasible, paint films with pre-existing damage or visually obscured surfaces would be selected for paint-chip sample collection. Floors, furniture, and adjacent areas would be protected during the sampling process and visible debris would be removed after sampling was completed.

An area of approximately two square inches is extracted from painted components down to but not including the substrate. Paint-chip samples would be placed in a sealed container, labeled, and shipped to an approved laboratory for analysis. Restoration and repainting of sampled surfaces is not within the scope of FEI's lead inspection protocol.

Paint samples would have been subjected to acid digestion in the laboratory and analysis by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) or Flame Atomic Absorption Spectrophotometry (FAAS). Laboratory test results of 0.5% by weight or greater are considered positive. **Paint-chip sampling was not required for this project as no inconclusive values were obtained.**

5.0 FINDINGS

XRF values taken from painted building components indicated lead is present above the HUD established action level of 1.0 mg/cm² for lead on the following painted components:

EXTERIOR

- Green Metal Pipe
- Green Metal Ladder
- Yellow Metal Post

INTERIOR

- Black Metal Panel
- Red Metal I-Beam

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

Refer to Table I for a summary of specific locations of components testing positive for leadbased paint. Area data sheets providing XRF results for all components tested can be found in Appendix A. Paint-chip sampling was not required for this project as no inconclusive values were obtained.

Although limited positive XRF values were detected at the building during the field inspection, TIMMONS GROUP should recognize that paint films usually have varying amounts of lead on what appears to be a homogeneous painted area.

Federal Occupational Safety Health Administration (OSHA) regulations do not include a specific level at which lead in paint is considered hazardous. The OSHA Lead in Construction standard (29 CFR 1926.62) requires that employers take certain actions when workers conduct work that results in disturbing paint containing any measurable concentration of lead.

This report should be read in its entirety, including detailed information, which is contained in other sections and appendices.

5.1 SUMMARY DATA TABLE(S)

TABLE I LBP SURVEY AREA SUMMARY DATA SHEET FORMER FULTON GAS WORKS – BUILDING #2 PEEBLE STREET RICHMOND, VIRGINIA

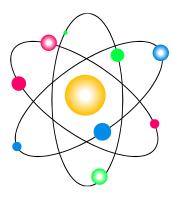
The following list of building components tested positive for lead-based paint:

XRF <u>Sample #</u>	Building <u>Component</u>	Paint <u>Color</u>	Sample Location	<u>Substrate</u>	Surface <u>Cond.</u>	Lead <u>mg/cm²</u>
Interior						
7	Panel	Black	Interior – Boiler	М	I	>9.9
8	I-Beam	Red	Interior – Next to Boiler	Μ	N/10	5.2
Exterior						
16	Pipe	Green	Exterior – Under Building	М	N/20	3.7
17	Ladder	Green	Exterior – Under Building	М	I	>9.9
18	Post	Yellow	Exterior – Room Under Building	М	N/10	6.1

APPENDICES

APPENDIX A. - XRF TEST RESULTS APPENDIX B. - SAMPLE LOCATION DRAWING APPENDIX C. - LEAD INSPECTOR'S LICENSE(S)

APPENDIX A.



XRF TEST RESULTS

LEAD-BASED PAINT SAMPLE DATA SHEET

Area Name:	Building #2
Unit Address:	Former Fulton Gas Works
	Peebles Street
	Richmond, Virginia
Project No	FEI-16AL243

Operator:Andrew BairdRecorder:Andrew BairdRMD Model:LPA-1Serial No.:2610Inspection Date:06/3/16

					Serial No.: 2610 Cal. Block Value: 1.0 mg/cm
	1 st	2 nd	3 rd	Avg.	Diff. between Avg. and Cal. Block
Entry	1.0	1.0	1.0	1.0	0.0
Exit	1.0	1.0	1.0	1.0	0.0

Key:

M=metal W=wood G=gypsum P=plaster PC=poured concrete RM=roofing material WP=wood panel C=concrete T=tile B=brick D=drywall CB=concrete block ST=stucco I=Indicates surface is intact N=NON-intact in (%) increments (Deteriorated Paint)

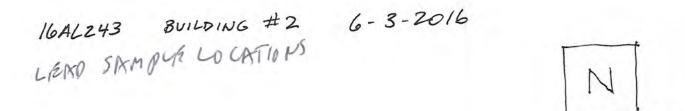
Sample #	Building Component	Paint Color	Sample Location	Sub Type	Surf Cond.	Quick (mg/cm ²)	Pos. Quantity (No. or SF)
1	Door	Gray	Interior – Main Entrance	М	N/80	-0.2	
2	Door Frame	Gray	Interior – Main Entrance	М	N/80	-0.2	
3	Wall	White	Interior – Main Area	В	N/10	-0.7	
4	I-Beam	Red/Gray	Interior – Main Area	М	N/30	-0.2	
5	Wall	Green	Interior – Main Area	В	N/10	-0.5	
6	Wall	Green	Interior – Main Area	СВ	N/10	-0.2	
7	Panel	Black	Interior – Boiler	м	I	>9.9	
8	I-Beam	Red	Interior – Next to Boiler	м	N/10	5.2	
9	Wheel	Gray	Interior – Main Area	М	N/40	-0.6	
10	Motor	Gray	Interior – Main Area	М	I	-0.6	
11	Pipe	Red	Interior – Main Area	М	N/40	-0.4	
12	Duct	Silver	Interior – Main Area	М	I	-0.3	
13	Handrail	Green	Exterior – Main Stairs	М	N/5	-0.5	
14	Runner	Green	Exterior – Main Stairs	М	N/5	-0.5	
15	Tank	Green	Exterior – Under Building	М	N/10	-0.5	
16	Pipe	Green	Exterior – Under Building	м	N/20	3.7	
17	Ladder	Green	Exterior – Under Building	м	I	>9.9	
18	Post	Yellow	Exterior – Room Under Building	м	N/10	6.1	

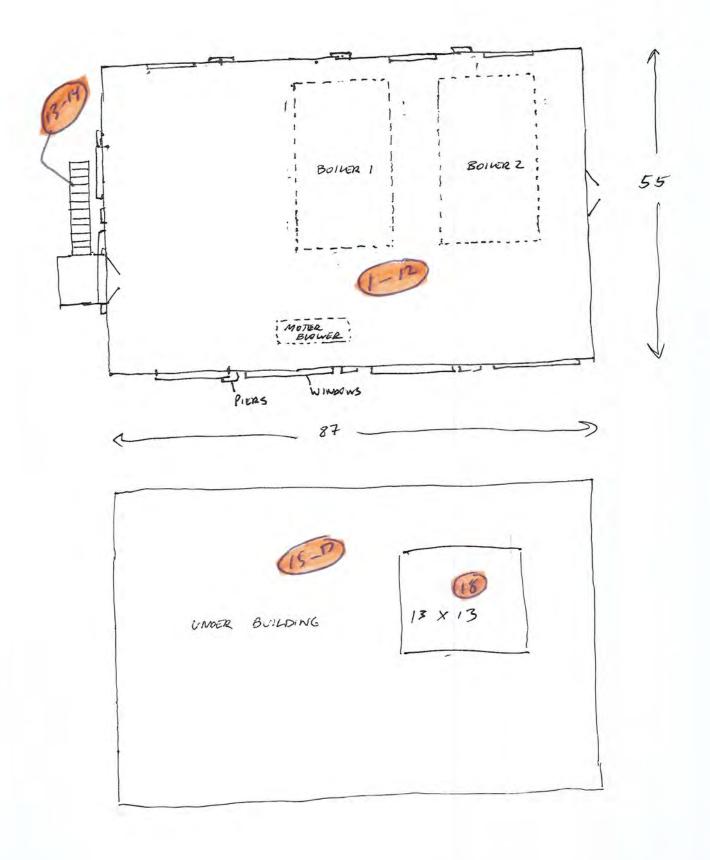
For an explanation of the XRF Quick value parameters see the LBP Survey Methodology Section of this Report.

APPENDIX B.

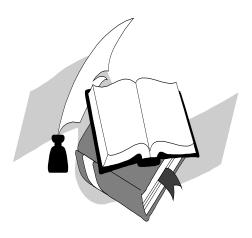


SAMPLE LOCATION DRAWING

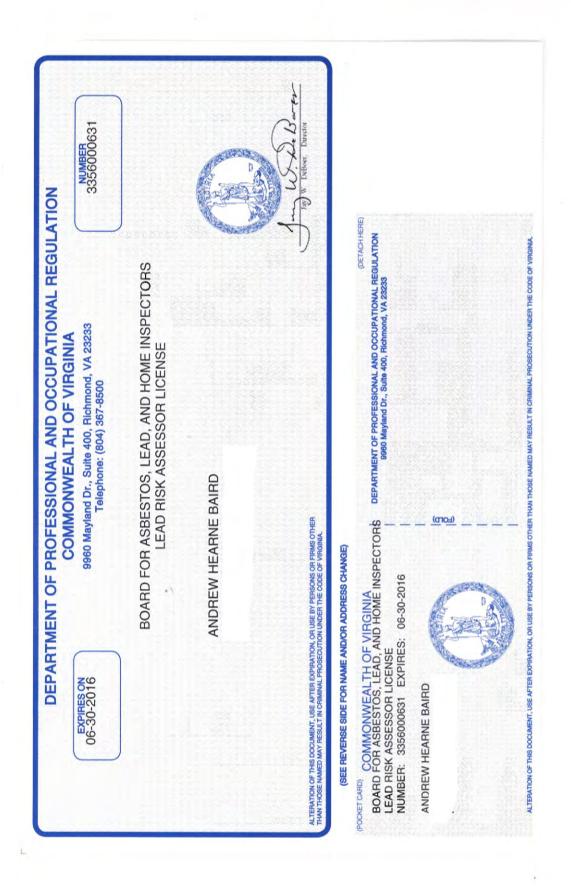




APPENDIX C.



PERSONNEL CERTIFICATIONS/LICENSE



GLOSSARY OF TERMS

Abatement - a comprehensive process of eliminating exposure or potential exposure to lead paint and lead-containing soil and dust which must include testing, measures for worker protection, containment of dust and debris, cleanup and disposal of waste, and clearance testing.

Action Level - the point at which something needs to be done to correct or eliminate the presence of the hazard (e.g. lead).

Acute Effect - severe or immediate reaction, usually to a single large exposure.

Administrative Removal - is the temporary removal of workers prior to their reaching blood lead levels requiring medical removal in order to provide additional protection to both workers and employers.

Apparent Lead Concentration (ALC) - for direct reading XRF's, is the average of at leas 3 XRF single cycle readings on a <u>painted</u> surface. For spectrum analyzers, the ALC is a single reading.

Atomic Absorption - is a method of measuring elements such as lead. The lead is vaporized at high temperature, usually several thousand degrees, and light of a very specific wavelength is shined through the vapor.

Biological Monitoring - is the analysis of person's blood and/or urine, to determine the level of a contaminant, such as lead, in the body.

Blank - a non-exposed sample of the medium used for testing, such as wipe or filter, which is analyzed like other samples to determine whether (1) samples are contaminated with lead before samples are collected (e.g., at the factory, or at the testing site), (2) the samples are contaminated after sample collection (e.g., during transportation to the laboratory or in the laboratory).

CFR - The Code of Federal Regulations - a codification of the regulations of the various Federal Agencies.

Characteristics - EPA has identified four characteristics of a hazardous waste: Ignitability; Corrosivity; Reactivity; and Toxicity. Any solid waste that exhibits one or more of these characteristics is classified as a hazardous waste under RCRA.

Chelation Therapy - the medical treatment in which a drug that is attracted to metals (such as lead) is infused into a patient's vein. The drug binds to the metal in the blood, and both are excreted by the kidney in urine.

Chronic Effect - a response to exposure, which may take days, months or years to develop.

Corrected Lead Concentrations (CLC) - the difference between the Apparent Lead Concentration (ALC) and the Substrate Equivalent Lead Concentration (SEL).

Common Area - a room or area that is accessible to all residents in a multi-family building (e.g., hallway, laundry room).

Containment - is a process for protecting the environment by controlling exposures to lead dust and debris created during abatement.

Detection Limit - the minimum amount of a component that a method can reliably measure.

Direct Reading XRF - is an X-Ray Fluorescence analyzer which provides the operator with a display of an estimated lead concentration, usually calculated from the lead "K" x-ray intensity, but sometimes from the "L" x-ray intensity.

dl - stands for "deciliter." The prefix "deci-" means "one-tenth." One deciliter is roughly the same as about one tenth of a quart, or about 3.4 fluid ounces.

Dwelling Unit - refers to the room or group of rooms within residential premises used or intended for use by one family or household for living, sleeping, cooking and eating. "Dwelling Unit" includes a condominium.

Encapsulation - involves resurfacing or covering surfaces, and sealing or caulking with durable materials, so as to prevent or control chalking, flaking lead-containing substances from becoming part of house dust or accessible to children. Painting or wallpapering is not considered to be encapsulation.

Engineering Controls - are measures implemented at the work site to contain, control and/or otherwise reduce worker exposure to, and environmental releases of, lead dust and debris.

EPA Identification Number - the unique number assigned by EPA to each generator or transporter of hazardous waste, and each treatment, storage, or disposal facility.

Final Inspection - inspection by a qualified inspector, industrial hygienist, or local public health official to determine whether abatement and cleanup are complete.

Generator - any entity who first creates a hazardous waste or any person who first makes the waste subject to the Subtitle C regulation (e.g., imports a hazardous waste, initiates a shipment of a hazardous waste from a TSD, or mixes hazardous wastes of different DOT shipping descriptions by placing them into a single container).

High Efficiency Particle Air Filter or (HEPA) - means a filter capable of filtering out particles of 0.3 microns or greater from a body of air at 99.97% efficiency or greater.

High Phosphate Detergent - detergent that contains at least 5% trisodium phosphate (TSP).

In-place Management - a series of recurrent actions to reduce the lead hazard until such time as abatement can be carried out. Usually involves paint stabilization and regular cleaning of the premises.

Intact Surface - refers to a surface with no loose paint.

Landfill - a disposal facility or part of a facility where solid or hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

Logbook - a notebook that accompanies each XRF analyzer, to record such information as daily performance, maintenance problems, and average reading time.

Manifest - the shipping document, EPA form 8700-22, used for identifying the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of treatment, storage, or disposal.

Medical Removal - the temporary removal of workers due to elevated blood levels as defined in the OSHA Lead Standard.

Micrograms - one millionth of a gram: The prefix "micro-" means "1/1,000,000 of" (one millionth of). Since there are 453 grams in one pound and 16 ounces in one pound, one gram equals 0.035 ounces. A microgram is equal to about 35/1,000,000,000 (thirty-five billionths) of an ounce.

Off-Site Paint Removal - the removal of paint at a site away from the abatement project such as the stripping of lead paint from the surface of a component at the facilities of a commercial paint-stripping operation occurring in chemical tanks.

On-Site Paint Removal - the removal of lead-based paint down to the bare substrate usually through heat, chemical or mechanical means. The affected component remains in-place on the premises during this removal process.

Personal Samples (for sampling lead dust) - air samples collected from within the breathing zone of a worker, but outside the respirator.

Pigments - are chemicals, which have color, or properties, which affect color.

ppm - stands for "parts per million," meaning the weight of one part per weight of the total amount of material. For example, a lead concentration of 1 ppm expresses the ratio of one gram of lead dissolved into one million (1,000,000) grams of water.

Precision - the degree of variation in a series of successive measurements of the same phenomenon. Commonly measured by standard deviation.

Public Housing Agency (PHA) - any State, county, municipality, or other governmental entity or public body (or agency or instrumentality thereof) which is authorized to engage or assist in the development or operation of housing for low-income families.

Random Testing - the process of performing an initial survey in a representative sampling of units in a project.

Resource Conservation and Recovery Act (RCRA) of 1976 - what we commonly refer to as RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA was amended in 1980 and most recently on November 8, 1984 by the Hazardous and Solid Waste Amendments.

Replacement - is strategies of abatement, which entails the removal of components such as windows, doors, and trim that have lead painted surfaces and installing new components free of lead paint.

Substrate Equivalent Lead Concentration (SEL) - for a direct reading XRF, the average of at least 3 XRF single cycle readings on an <u>unpainted</u> surface. For a spectrum analyzer, the difference between the instruments reading on a standard or reference material placed on the bare substrate and the known lead level in the standard.

Small Quantity Generator - as defined by EPA, a generator who produces less than 100 kg of hazardous waste per month (or accumulates less than 100 kg at any one time) or one who produces less than 1 kg of acutely hazardous waste per month (or accumulates less than 1 kg of acutely hazardous waste per month (or accumulates less than 1 kg of acutely hazardous waste at any one time). State definitions of Small Quantity Generator may vary.

Spectrum Analyzer XRF - is a type of XRF analyzer, which provides the operator with a plot of the energy and intensity of both "K" and "L" x-rays, as well as a calculated lead concentration.

Storage - the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed or, or stored elsewhere.

Substrate - a surface upon which paint or varnish has been or may be applied. Examples of substrates include wood, plaster, metal, and drywall. Substrates may contain lead absorbed from paint or from other sources.

Substrate Effect - the returning of backscattered radiation from the paint, substrate or underlying material to the XRF analyzer. This radiation when counted as lead x-rays by an XRF contributes to SEL or bias. The inspector may have to compensate for this effect when using direct reading XRF analyzers.

Toxicity Characteristic Leaching Procedure (TCLP) - is one of the tests for the determinations of whether a solid waste is classified as a hazardous substance.

Transporter - any person engaged in the off-site transportation of hazardous waste within the United States, by air, rail, highway, or water, if such transportation requires a manifest under 40 CFR Part 262.

Treatment - any method, technique or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize it, or render it non-hazardous or less hazardous, or to recover it, make it safer to transport, store or dispose of, or amenable for recovery, storage, or volume reduction.

TSD - acronym for treatment, storage, or disposal hazardous waste facility.

TSP - acronym for trisodium phosphate.

XRF Analyzer - an instrument, which estimates lead concentration in milligrams per square centimeter (mg/cm²) using the principal of x-ray fluorescent ("XRF"). Two (2) types of XRF analyzers are used, direct readers and spectrum analyzers; the underlying principles are the same.



Environmental Consulting Services

7834 Forest Hill Avenue, Suite 7, Richmond, Virginia 23225 ph 804.716.0560 fax 804.918.7098 web FranceEnv.com

August 17, 2016

Timmons Group 1001 Boulders Parkway Suite 300 Richmond, Virginia 23225

- ATTN: Mr. John T. Russell, AIPG CPG Senior Environmental Project Manager
- RE: Lead-Based Paint Inspection Report City of Richmond Former Fulton Gas Works **Building #3 and Storage Canopy** Peebles Street Richmond, Virginia FEI Project Number: FEI-16AL243



View of Building #3 & Storage Canopy

Dear Mr. Russell:

France Environmental, Inc. (FEI) is presenting you with the Lead Survey Report for the lead inspection recently completed at the Former Fulton Gas Works – Building #3 and Storage Canopy. The results of this testing, conducted on June 3, 2016 can be found in the accompanying report.

We appreciate this opportunity to provide professional services for this project. If we can be of further assistance or if you have any questions concerning this report, please do not hesitate to call.

Respectfully submitted,

FRANCE ENVIRONMENTAL, INC.

Andrew Baird

Andrew H. Baird Lead Inspector

anobrew S. Richmond

Andrew S. Richmond Project Manager

Enclosures

LEAD-BASED PAINT SURVEY REPORT

CONDUCTED AT:

FORMER FULTON GAS WORKS BUILDING #3 AND STORAGE CANOPY PEEBLES STREET RICHMOND, VIRGINIA

PREPARED FOR:

TIMMONS GROUP 1001 BOULDERS PARKWAY SUITE 300 RICHMOND, VIRGINIA 23225

PREPARED BY:

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GLOSSARY OF TERMS

1.0 SUMMARY

TIMMONS GROUP retained France Environmental, Inc. (FEI) to conduct a comprehensive lead-based paint sampling survey of Building #3 and the Storage Canopy at the Former Fulton Gas Works, located on Peebles Street in Richmond, Virginia. A summary of findings is contained in the following paragraph(s).

XRF test results indicated that lead is present above 1.0 mg/cm² on the following painted building components:

EXTERIOR

• None

INTERIOR

- Green Metal Post
- Gray Metal Door Frame

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

A list of all components testing positive for lead can be found in Table I. A complete summary of all XRF test results is included in Appendix A of this report.

2.0 INTRODUCTION

2.1 GENERAL INFORMATION

The building for which this testing was performed is the Former Fulton Gas Works - Building #3 and Storage Canopy in Richmond, Virginia. The building is a one-story structure. Various interior and exterior painted building components are included in this lead survey.

The building was constructed prior to 1978. In 1978, the Consumer Product Safety Commission banned the sale of lead-based paint to consumers, and its application to areas where consumers have direct access to painted surfaces. As a result of this ban, buildings painted prior to 1978 are suspected of containing lead paint.

This report has been prepared for the exclusive use of TIMMONS GROUP for the Former Fulton Gas Works - Building #3 and Storage Canopy property located at Peebles Street in Richmond, Virginia. It is not intended for the use or benefit of any other party.

2.2 AUTHORIZATION

Authorization to perform this testing was given by receipt of a signed copy of FEI Proposal Number FEI-16124 dated May 25, 2016. Mr. John T. Russell, AIPG CPG, Senior Environmental Project Manager with TIMMONS GROUP signed the proposal for the client. Access to the building was provided to FEI by the TIMMONS GROUP. The building was vacant at the time of the inspection.

2.3 PURPOSE

The purpose of the lead-based paint testing was to identify painted surfaces or other surface coatings that contain lead in excess of 1.0 mg/cm² by XRF testing or 0.5% by weight (5000 ppm) by laboratory analysis.

The information provided in this report may be used by TIMMONS GROUP to make decisions regarding lead-based paint management and abatement strategies or the need for additional testing.

2.4 WARRANTY

The information contained in this report is based upon the data furnished by TIMMONS GROUP and observations and test results provided by FEI. These observations and results are time dependent, are subject to changing site conditions, and revisions to Federal, state, and local regulations.

FEI warrants that these findings have been promulgated after being prepared in accordance with generally accepted practices in the lead-based paint testing industry. No other warranties are implied or expressed.

FEI also recognizes that raw XRF and laboratory test data are usually not sufficient to make all abatement and management decisions and recommends that FEI be afforded an opportunity to review abatement specifications so test results may be properly interpreted and implemented.

3.0 SCOPE OF SERVICES

The scope of services for this project included an interview with Client contacts to determine the approximate construction date and painting history of the building and areas to be tested, the performance of field and laboratory testing programs, and the preparation of a report detailing where and at what concentrations lead was found.

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

XRF testing of interior components was performed on randomly selected painted, stained, and/or varnished surfaces in general accordance with the U.S. Department of Housing and Urban Development's (HUD) <u>Guidelines for the Evaluation and Control of Lead-Based Paint</u> <u>Hazards in Housing</u>, Chapter 7: Lead-Based Paint Inspection, 2012 Edition.

Prior to conducting the lead-based paint testing, TIMMONS GROUP was advised that a number of paint samples and substrate readings may have to be obtained which would require the removal of paint-chip samples from painted surfaces. Paint-chip sampling is generally required when an irregular or unusually small surface is encountered which cannot be assayed with an XRF device or when initial XRF test values are inconclusive. If conducted, an effort would have been made to collect bulk samples from inconspicuous or damaged locations where possible, but restoration of sampled surfaces would have not been within the scope of this survey. *Paint-chip sampling was not required for this project as no inconclusive values were obtained.*

4.0 METHODOLOGY

4.1 FIELD SURVEY - GENERAL

XRF field-testing was performed with the LPA-1, manufactured by Radiation Monitoring Devices (RMD). The use of a portable, non-destructive testing device is advantageous when numerous tests must be performed because of its brief testing time and relatively low cost compared to laboratory methods.

XRF test data, including calibration checks against standards, and confirmation paint-chip samples were recorded on inspection worksheet(s) to generate a permanent record of the field findings. XRF test data stored in a data logger can also be used to generate the final report.

Field chain-of-custody forms are completed for the bulk paint-chip samples at the point of collection and a copy is maintained in the shipping office. Confirmation samples, if collected, were shipped to a National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory for analysis by Flame Atomic Absorption Spectroscopy (FAAS) or Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES).

4.2 XRF TESTING

XRF values are collected by placing the scanner on the test surface and exposing the lead paint film to gamma radiation. XRF analyzers are usually capable of penetrating up to 25 layers of paint to determine lead content. At the conclusion of each test, the shutter is closed and the display on the control console shows the lead concentration in mg/cm² for manual tabulation, or in some cases, store sampling information in sequence in a data logger, which can be transferred to a computer for sorting and report generation.

4.3 INTERPRETATION OF XRF RESULTS - SPECTRUM ANALYZER

XRF results are identified as positive, negative, or inconclusive based on Performance Characteristic Sheets (PCS), developed by HUD and EPA for each model of XRF device that is commercially available.

"Positive" refers to XRF results greater than or equal to the threshold.

"Negative" refers to XRF results less than the threshold.

The Federal Guidelines recommend classifying XRF results to the 1.0 mg/cm² standard whenever possible. If states or local jurisdictions adopt standards that differ from the Federal Guideline, the most stringent rules are applied.

For this project:

"**Positive**" refers to XRF results greater than or equal to (1.0 mg/cm²)

"Negative" refers to XRF results less than (1.0 mg/cm²)

4.4 REPORT FORMAT

Spreadsheets containing a compilation of XRF sampling results by building component for tested areas are included in Appendix A of this report. Individual test spots are listed in the spreadsheets, including but not limited to a unique sample number, color and paint condition, substrate type, a description of the building component, location, positive quantity, lab result, quick mode, and the test value in mg/cm². Summary data listing all components testing positive for lead-based paint according to HUD Guidelines are listed in Table I.

The Sample Location Drawing will show where components were tested for lead-based paint. The numbered XRF test spots are presented in Appendix B of this report.

4.5 CONFIRMATION LABORATORY SAMPLES

The collection of paint-chip samples is required when initial XRF test values are inconclusive or when an irregular or unusually small surface was encountered which cannot be assayed with an XRF device. When technically feasible, paint films with pre-existing damage or visually obscured surfaces would be selected for paint-chip sample collection. Floors, furniture, and adjacent areas would be protected during the sampling process and visible debris would be removed after sampling was completed.

An area of approximately two square inches is extracted from painted components down to but not including the substrate. Paint-chip samples would be placed in a sealed container, labeled, and shipped to an approved laboratory for analysis. Restoration and repainting of sampled surfaces is not within the scope of FEI's lead inspection protocol.

Paint samples would have been subjected to acid digestion in the laboratory and analysis by Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) or Flame Atomic Absorption Spectrophotometry (FAAS). Laboratory test results of 0.5% by weight or greater are considered positive. **Paint-chip sampling was not required for this project as no inconclusive values were obtained.**

5.0 FINDINGS

XRF values taken from painted building components indicated lead is present above the HUD established action level of 1.0 mg/cm² for lead on the following painted components:

EXTERIOR

• None

INTERIOR

- Green Metal Post
- Gray Metal Door Frame

During the lead inspection, FEI may not conduct lead testing in every room and/or sample every painted/varnished/stained building component. However, all like building materials, i.e., same color/substrate, etc., are grouped together and considered positive or negative in conjunction with the building materials that were sampled. FEI conducts sampling of building materials that are representative of the possible lead containing materials in a building.

Refer to Table I for a summary of specific locations of components testing positive for leadbased paint. Area data sheets providing XRF results for all components tested can be found in Appendix A. Paint-chip sampling was not required for this project as no inconclusive values were obtained.

Although limited positive XRF values were detected at the building during the field inspection, TIMMONS GROUP should recognize that paint films usually have varying amounts of lead on what appears to be a homogeneous painted area.

Federal Occupational Safety Health Administration (OSHA) regulations do not include a specific level at which lead in paint is considered hazardous. The OSHA Lead in Construction standard (29 CFR 1926.62) requires that employers take certain actions when workers conduct work that results in disturbing paint containing any measurable concentration of lead.

This report should be read in its entirety, including detailed information, which is contained in other sections and appendices.

5.1 SUMMARY DATA TABLE(S)

TABLE I LBP SURVEY AREA SUMMARY DATA SHEET FORMER FULTON GAS WORKS – BUILDING #3 AND STORAGE CANOPY PEEBLE STREET RICHMOND, VIRGINIA

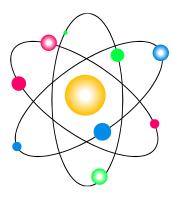
The following list of building components tested positive for lead-based paint:

XRF <u>Sample #</u>	Building <u>Component</u>	Paint <u>Color</u>	Sample Location	<u>Substrate</u>	Surface Cond.	Lead <u>mg/cm²</u>
Exterior						
9	Post	Green	Exterior – Front of Building	М	N/30	9.0
11	Door Frame	Gray	Exterior – Main Entrance	м	N/10	3.7

APPENDICES

APPENDIX A. - XRF TEST RESULTS APPENDIX B. - SAMPLE LOCATION DRAWING APPENDIX C. - LEAD INSPECTOR'S LICENSE(S)

APPENDIX A.



XRF TEST RESULTS

LEAD-BASED PAINT SAMPLE DATA SHEET

Area Name:	Building #3/Storage Canopy
Unit Address:	Former Fulton Gas Works
	Peebles Street
	Richmond, Virginia
Project No	FEI-16AL243

Operator:Andrew BairdRecorder:Andrew BairdRMD Model:LPA-1Serial No.:2610Inspection Date:06/3/16

RMD N	/lodel:	LPA-1		Serial No.: 2610					
Calibra	tion Ch	eck To	lerance	Cal. Block Value: 1.0 mg/cm					
	1 st	2 nd	3 rd	Avg.	Diff. between Avg. and Cal. Block				
Entry	1.0	1.0	1.0	1.0	0				
Exit	1.0	1.0	1.0	1.0	0				

Key:

M=metal W=wood G=gypsum P=plaster PC=poured concrete RM=roofing material WP=wood panel C=concrete T=tile B=brick D=drywall CB=concrete block ST=stucco I=Indicates surface is intact N=NON-intact in (%) increments (Deteriorated Paint)

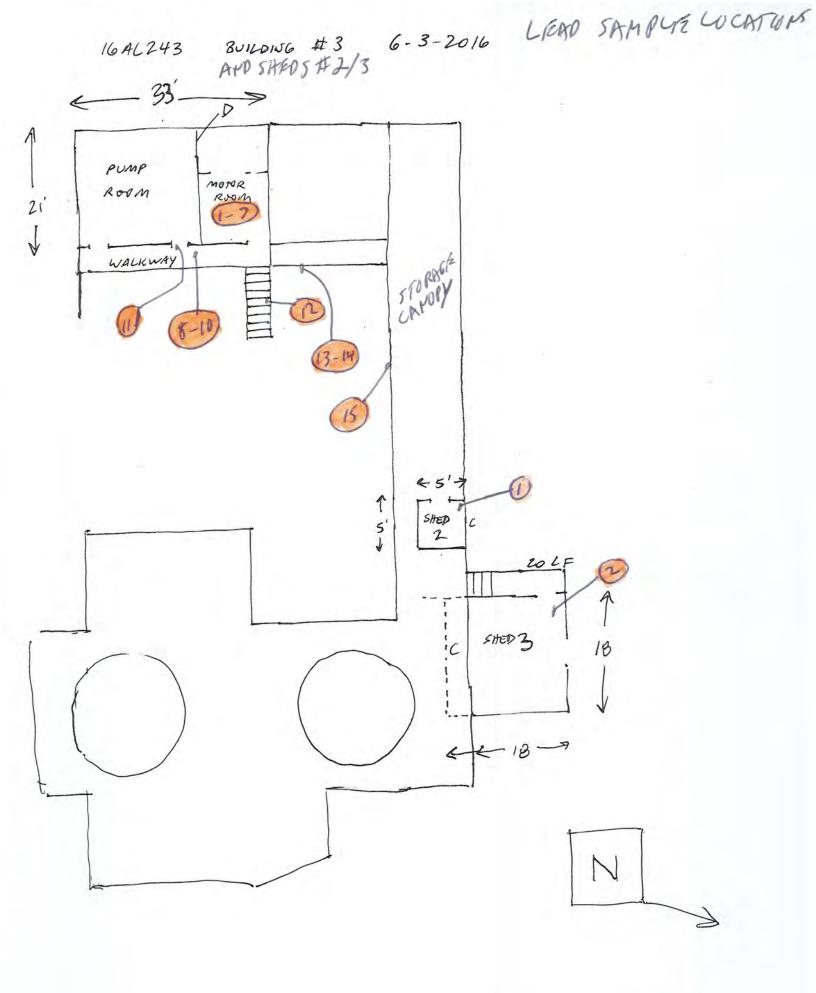
Sample #	Building Component	Paint Color	Sample Location	Sub Type	Surf Cond.	Quick (mg/cm ²)	Pos. Quantity (No. or SF)
1	Panel	Black	Interior – Motor Room	М	I	-0.4	
2	I-Beam	Yellow	Interior – Motor Room		N/10	-0.2	
3	Pipe	Green	Interior – Motor Room	М	N/35	0.0	
4	Fan Blower	Gray	Interior – Motor Room	М	N/20	-0.3	
5	Wall	Tan	Interior – Motor Room	М	I	0.1	
6	Wall	Brown	Interior – Motor Room	М	I	-0.2	
7	Wall	Yellow	Interior – Motor Room	С	N/10	-0.3	
8	Wall Trim	Green	Exterior – Front of Building	М	I	-0.4	
9	Post	Green	Exterior – Front of Building	м	N/30	9.0	
10	Handrail	Green	Exterior – Front of Building	М	N/30	-0.1	
11	Door Frame	Gray	Exterior – Main Entrance	м	N/10	3.7	
12	Canopy	Green	Exterior – Stairs	М	N/15	-0.1	
13	I-Beam	Green	Exterior – Under Building	М	N/5	-0.3	
14	Circular Column	Green	Exterior – Under Building	М	N/5	-0.3	
15	Circular Column	Green	Exterior – Storage Canopy	М	N/6	-0.3	
				-			

For an explanation of the XRF Quick value parameters see the LBP Survey Methodology Section of this Report.

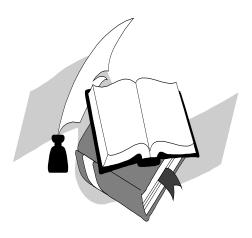
APPENDIX B.



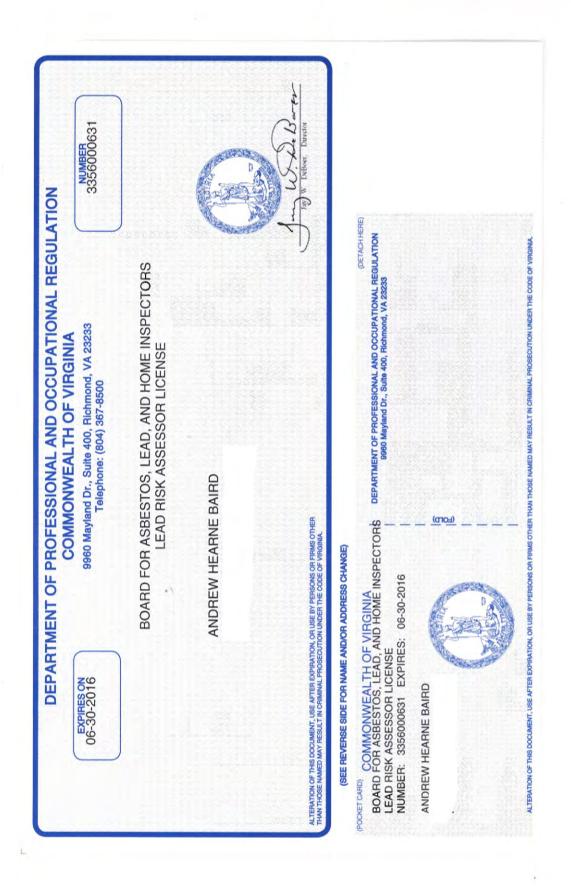
SAMPLE LOCATION DRAWING



APPENDIX C.



PERSONNEL CERTIFICATIONS/LICENSE



GLOSSARY OF TERMS

Abatement - a comprehensive process of eliminating exposure or potential exposure to lead paint and lead-containing soil and dust which must include testing, measures for worker protection, containment of dust and debris, cleanup and disposal of waste, and clearance testing.

Action Level - the point at which something needs to be done to correct or eliminate the presence of the hazard (e.g. lead).

Acute Effect - severe or immediate reaction, usually to a single large exposure.

Administrative Removal - is the temporary removal of workers prior to their reaching blood lead levels requiring medical removal in order to provide additional protection to both workers and employers.

Apparent Lead Concentration (ALC) - for direct reading XRF's, is the average of at leas 3 XRF single cycle readings on a <u>painted</u> surface. For spectrum analyzers, the ALC is a single reading.

Atomic Absorption - is a method of measuring elements such as lead. The lead is vaporized at high temperature, usually several thousand degrees, and light of a very specific wavelength is shined through the vapor.

Biological Monitoring - is the analysis of person's blood and/or urine, to determine the level of a contaminant, such as lead, in the body.

Blank - a non-exposed sample of the medium used for testing, such as wipe or filter, which is analyzed like other samples to determine whether (1) samples are contaminated with lead before samples are collected (e.g., at the factory, or at the testing site), (2) the samples are contaminated after sample collection (e.g., during transportation to the laboratory or in the laboratory).

CFR - The Code of Federal Regulations - a codification of the regulations of the various Federal Agencies.

Characteristics - EPA has identified four characteristics of a hazardous waste: Ignitability; Corrosivity; Reactivity; and Toxicity. Any solid waste that exhibits one or more of these characteristics is classified as a hazardous waste under RCRA.

Chelation Therapy - the medical treatment in which a drug that is attracted to metals (such as lead) is infused into a patient's vein. The drug binds to the metal in the blood, and both are excreted by the kidney in urine.

Chronic Effect - a response to exposure, which may take days, months or years to develop.

Corrected Lead Concentrations (CLC) - the difference between the Apparent Lead Concentration (ALC) and the Substrate Equivalent Lead Concentration (SEL).

Common Area - a room or area that is accessible to all residents in a multi-family building (e.g., hallway, laundry room).

Containment - is a process for protecting the environment by controlling exposures to lead dust and debris created during abatement.

Detection Limit - the minimum amount of a component that a method can reliably measure.

Direct Reading XRF - is an X-Ray Fluorescence analyzer which provides the operator with a display of an estimated lead concentration, usually calculated from the lead "K" x-ray intensity, but sometimes from the "L" x-ray intensity.

dl - stands for "deciliter." The prefix "deci-" means "one-tenth." One deciliter is roughly the same as about one tenth of a quart, or about 3.4 fluid ounces.

Dwelling Unit - refers to the room or group of rooms within residential premises used or intended for use by one family or household for living, sleeping, cooking and eating. "Dwelling Unit" includes a condominium.

Encapsulation - involves resurfacing or covering surfaces, and sealing or caulking with durable materials, so as to prevent or control chalking, flaking lead-containing substances from becoming part of house dust or accessible to children. Painting or wallpapering is not considered to be encapsulation.

Engineering Controls - are measures implemented at the work site to contain, control and/or otherwise reduce worker exposure to, and environmental releases of, lead dust and debris.

EPA Identification Number - the unique number assigned by EPA to each generator or transporter of hazardous waste, and each treatment, storage, or disposal facility.

Final Inspection - inspection by a qualified inspector, industrial hygienist, or local public health official to determine whether abatement and cleanup are complete.

Generator - any entity who first creates a hazardous waste or any person who first makes the waste subject to the Subtitle C regulation (e.g., imports a hazardous waste, initiates a shipment of a hazardous waste from a TSD, or mixes hazardous wastes of different DOT shipping descriptions by placing them into a single container).

High Efficiency Particle Air Filter or (HEPA) - means a filter capable of filtering out particles of 0.3 microns or greater from a body of air at 99.97% efficiency or greater.

High Phosphate Detergent - detergent that contains at least 5% trisodium phosphate (TSP).

In-place Management - a series of recurrent actions to reduce the lead hazard until such time as abatement can be carried out. Usually involves paint stabilization and regular cleaning of the premises.

Intact Surface - refers to a surface with no loose paint.

Landfill - a disposal facility or part of a facility where solid or hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well.

Logbook - a notebook that accompanies each XRF analyzer, to record such information as daily performance, maintenance problems, and average reading time.

Manifest - the shipping document, EPA form 8700-22, used for identifying the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of treatment, storage, or disposal.

Medical Removal - the temporary removal of workers due to elevated blood levels as defined in the OSHA Lead Standard.

Micrograms - one millionth of a gram: The prefix "micro-" means "1/1,000,000 of" (one millionth of). Since there are 453 grams in one pound and 16 ounces in one pound, one gram equals 0.035 ounces. A microgram is equal to about 35/1,000,000,000 (thirty-five billionths) of an ounce.

Off-Site Paint Removal - the removal of paint at a site away from the abatement project such as the stripping of lead paint from the surface of a component at the facilities of a commercial paint-stripping operation occurring in chemical tanks.

On-Site Paint Removal - the removal of lead-based paint down to the bare substrate usually through heat, chemical or mechanical means. The affected component remains in-place on the premises during this removal process.

Personal Samples (for sampling lead dust) - air samples collected from within the breathing zone of a worker, but outside the respirator.

Pigments - are chemicals, which have color, or properties, which affect color.

ppm - stands for "parts per million," meaning the weight of one part per weight of the total amount of material. For example, a lead concentration of 1 ppm expresses the ratio of one gram of lead dissolved into one million (1,000,000) grams of water.

Precision - the degree of variation in a series of successive measurements of the same phenomenon. Commonly measured by standard deviation.

Public Housing Agency (PHA) - any State, county, municipality, or other governmental entity or public body (or agency or instrumentality thereof) which is authorized to engage or assist in the development or operation of housing for low-income families.

Random Testing - the process of performing an initial survey in a representative sampling of units in a project.

Resource Conservation and Recovery Act (RCRA) of 1976 - what we commonly refer to as RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA was amended in 1980 and most recently on November 8, 1984 by the Hazardous and Solid Waste Amendments.

Replacement - is strategies of abatement, which entails the removal of components such as windows, doors, and trim that have lead painted surfaces and installing new components free of lead paint.

Substrate Equivalent Lead Concentration (SEL) - for a direct reading XRF, the average of at least 3 XRF single cycle readings on an <u>unpainted</u> surface. For a spectrum analyzer, the difference between the instruments reading on a standard or reference material placed on the bare substrate and the known lead level in the standard.

Small Quantity Generator - as defined by EPA, a generator who produces less than 100 kg of hazardous waste per month (or accumulates less than 100 kg at any one time) or one who produces less than 1 kg of acutely hazardous waste per month (or accumulates less than 1 kg of acutely hazardous waste per month (or accumulates less than 1 kg of acutely hazardous waste at any one time). State definitions of Small Quantity Generator may vary.

Sodium Sulfide - is a chemical used to test a paint sample qualitatively for lead; typical concentrations are from 6 to 10%. A positive test is characterized by a gray or black discoloration of the paint film cross section.

Spectrum Analyzer XRF - is a type of XRF analyzer, which provides the operator with a plot of the energy and intensity of both "K" and "L" x-rays, as well as a calculated lead concentration.

Storage - the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed or, or stored elsewhere.

Substrate - a surface upon which paint or varnish has been or may be applied. Examples of substrates include wood, plaster, metal, and drywall. Substrates may contain lead absorbed from paint or from other sources.

Substrate Effect - the returning of backscattered radiation from the paint, substrate or underlying material to the XRF analyzer. This radiation when counted as lead x-rays by an XRF contributes to SEL or bias. The inspector may have to compensate for this effect when using direct reading XRF analyzers.

Toxicity Characteristic Leaching Procedure (TCLP) - is one of the tests for the determinations of whether a solid waste is classified as a hazardous substance.

Transporter - any person engaged in the off-site transportation of hazardous waste within the United States, by air, rail, highway, or water, if such transportation requires a manifest under 40 CFR Part 262.

Treatment - any method, technique or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize it, or render it non-hazardous or less hazardous, or to recover it, make it safer to transport, store or dispose of, or amenable for recovery, storage, or volume reduction.

TSD - acronym for treatment, storage, or disposal hazardous waste facility.

TSP - acronym for trisodium phosphate.

XRF Analyzer - an instrument, which estimates lead concentration in milligrams per square centimeter (mg/cm^2) using the principal of x-ray fluorescent ("XRF"). Two (2) types of XRF analyzers are used, direct readers and spectrum analyzers; the underlying principles are the same.

Environmental Consulting Services



7834 Forest Hill Avenue, Suite 7, Richmond, Virginia 23225 ph 804.716.0560 fax 804.918.7098 web FranceEnv.com

August 17, 2016

Timmons Group 1001 Boulders Parkway Suite 300 Richmond, VA 23225

- ATTN: Mr. John T. Russell, AIPG CPG Senior Environmental Project Manager
- RE: Lead-Based Paint XRF Sampling Report City of Richmond Former Fulton Gas Works **Shed #1** Peebles Street Richmond, Virginia FEI Project Number: FEI-16AL243



View of Shed #1

Dear Mr. Russell:

France Environmental, Inc. (FEI) has completed the lead-based paint (LBP) sampling at the commercial vacant building referenced above. The scope of work included painted interior and exterior areas. Mr. Andrew H. Baird (Virginia Lead-Based Paint Inspector/Risk Assessor License Number 3356000631) conducted the fieldwork on June 3, 2016.

The limited lead-based paint (LBP) sampling was performed by an EPA accredited and Virginia licensed lead-based paint inspector/risk assessor. An X-Ray Fluorescence (XRF) machine is a portable, non-destructive testing device, which was used to measure the lead content in paint. XRF field-testing was performed with the LPA-1, manufactured by Radiation Monitoring Devices (RMD). XRF test data, including calibration checks against known standards, were recorded on an inspection worksheet to generate a permanent record of the data. One (1) shot was taken with the XRF machine to determine the lead content in the painted building components throughout the vacant building.

The Commonwealth of Virginia and the Environmental Protection Agency (EPA) considers any paints that result in an XRF reading of 1.0 mg/cm² or above to be a lead-based paint. The building component tested at this structure was not found to be coated with lead-based paint.

Attached with this letter report is a copy of the inspector/risk assessor license; sample location drawing; and sample data sheet. Thank you for using France Environmental, Inc. Should you have any questions or require additional information, please contact us at (804) 716-0560.

Respectfully Submitted,

FRANCE ENVIRONMENTAL, INC.

ndrew Bard

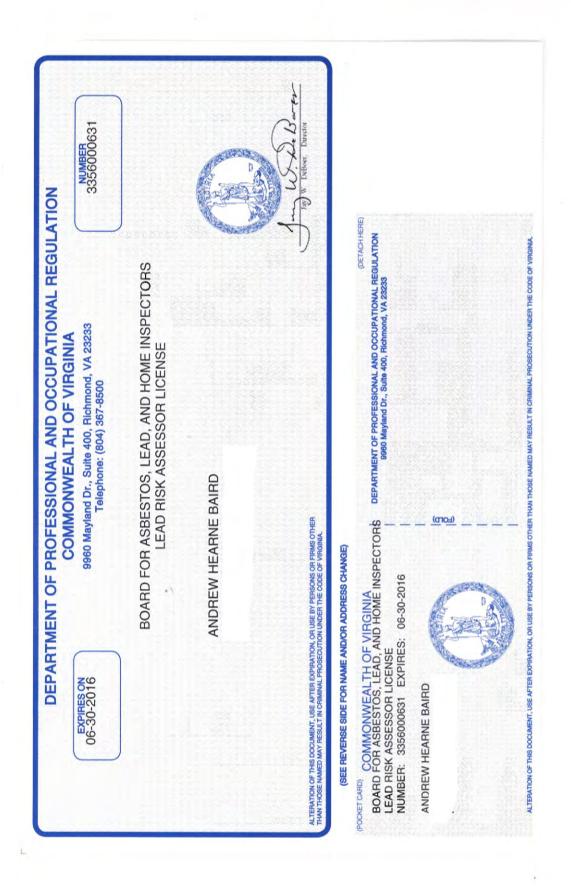
Andrew H. Baird Lead-Based Paint Inspector/Risk Assessor

andrew S. Richmond

Andrew S. Richmond Project Manager

Attachments: Virginia Lead Risk Assessor License Sample Location Drawing XRF Sample Data Sheet

VIRGINIA LEAD INSPECTOR/RISK ASSESSOR LICENSE



SAMPLE LOCATION DRAWING

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LEND SAMPLE LOCATIONS FET-16ASL 243 SHED#1

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XRF SAMPLE DATA SHEET

LEAD-BASED PAINT SAMPLE DATA SHEET

Area Name:	Shed #1
Unit Address:	Former Fulton Gas Works
	Peebles Street
	Richmond, Virginia
Project No	FEI-16AL243

Key:

M=metal W=wood G=gypsum P=plaster PC=poured concrete RM=roofing material WP=wood panel C=concrete T=tile B=brick D=drywall CB=concrete block ST=stucco

Operator:	Andrew Baird
Recorder:	Andrew Baird
RMD Model:	LPA-1
Serial No.:	2610
Inspection Date:	06/3/16

I=Indicates surface is intact N=NON-intact in (%) increments (Deteriorated Paint)

Sample #	Building Component	Paint Color	Sample Location	Sub Type	Surf Cond.	Quick (mg/cm ²)	Pos. Quantity (No. or SF)
1	Wall	Blue	Front	W	N/60	-0.1	

For an explanation of the XRF Quick value parameters see the LBP Survey Methodology Section of this Report.

Environmental Consulting Services



7834 Forest Hill Avenue, Suite 7, Richmond, Virginia 23225 ph 804.716.0560 fax 804.918.7098 web FranceEnv.com

August 17, 2016

Timmons Group

1001 Boulders Parkway Suite 300 Richmond, VA 23225

- ATTN: Mr. John T. Russell, AIPG CPG Senior Environmental Project Manager
- RE: Lead-Based Paint XRF Sampling Report City of Richmond Former Fulton Gas Works **Sheds #2 and #3** Peebles Street Richmond, Virginia FEI Project Number: FEI-16AL243



View of Sheds #2 and #3

Dear Mr. Russell:

France Environmental, Inc. (FEI) has completed the lead-based paint (LBP) sampling at the vacant commercial building referenced above. The scope of work included painted interior and exterior areas. Mr. Andrew H. Baird (Virginia Lead-Based Paint Inspector/Risk Assessor License Number 3356000631) conducted the fieldwork on June 3, 2016.

The limited lead-based paint (LBP) sampling was performed by an EPA accredited and Virginia licensed lead-based paint inspector/risk assessor. An X-Ray Fluorescence (XRF) machine is a portable, non-destructive testing device, which was used to measure the lead content in paint. XRF field-testing was performed with the LPA-1, manufactured by Radiation Monitoring Devices (RMD). XRF test data, including calibration checks against known standards, were recorded on an inspection worksheet to generate a permanent record of the data. Two (2) shots were taken with the XRF machine to determine the lead content in the painted building components throughout the vacant building.

The Commonwealth of Virginia and the Environmental Protection Agency (EPA) considers any paints that result in an XRF reading of 1.0 mg/cm² or above to be a lead-based paint. All of the tested building components that were sampled were determined to be negative for lead-based paint.

Attached with this letter report is a copy of the inspector/risk assessor license; sample location drawing; and sample data sheet. Thank you for using France Environmental, Inc. Should you have any questions or require additional information, please contact us at (804) 716-0560.

Respectfully Submitted,

FRANCE ENVIRONMENTAL, INC.

Andrew Baird

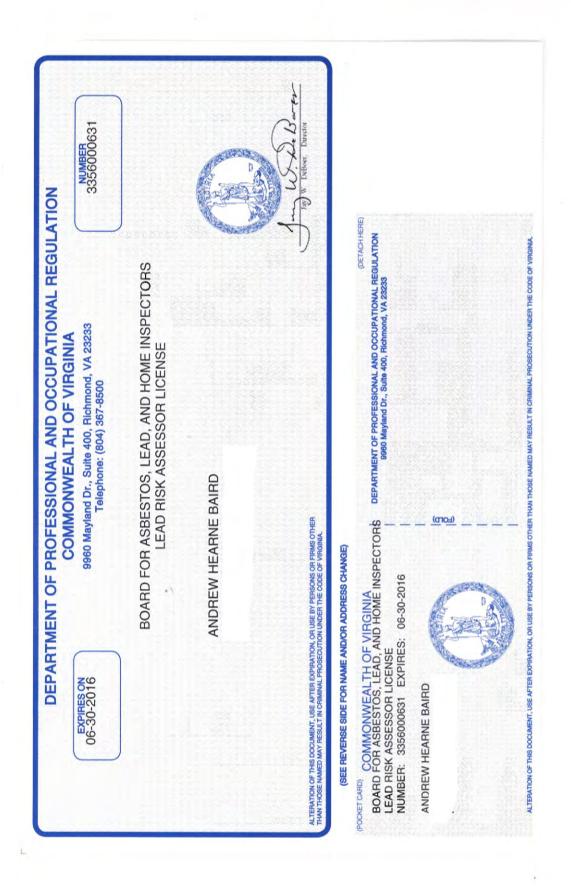
Andrew H. Baird Lead-Based Paint Inspector/Risk Assessor

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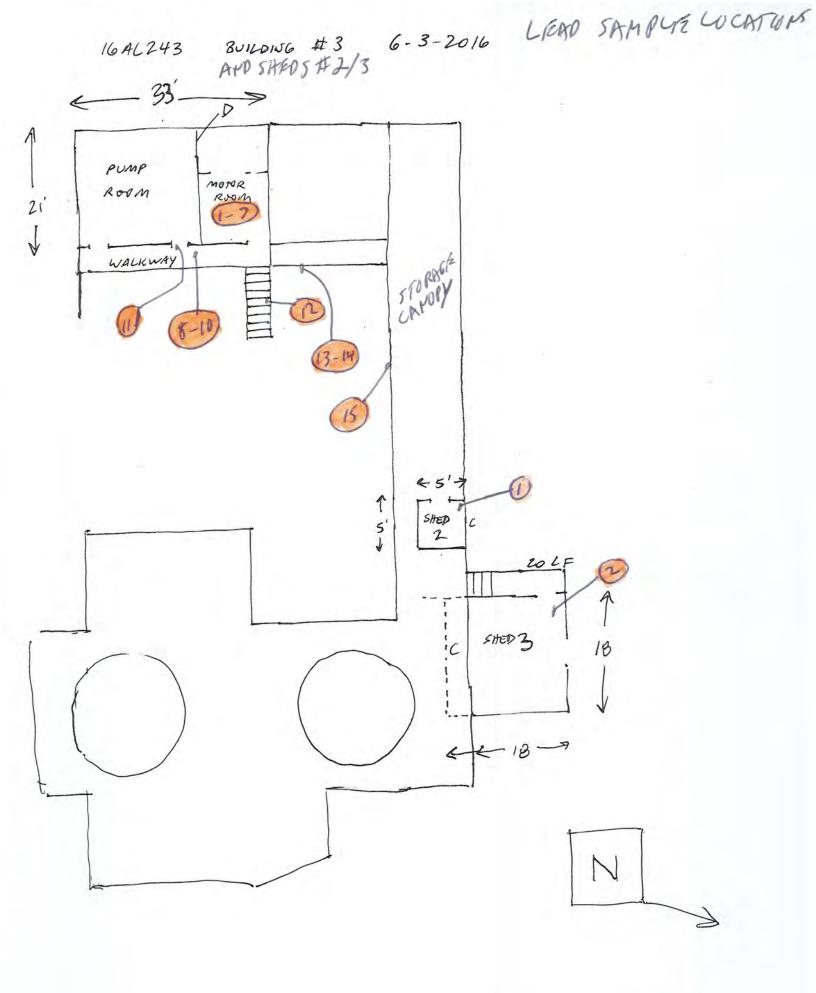
Andrew S. Richmond Project Manager

Attachments: Virginia Lead Risk Assessor License Sample Location Drawing XRF Sample Data Sheet

VIRGINIA LEAD INSPECTOR/RISK ASSESSOR LICENSE



SAMPLE LOCATION DRAWING



XRF SAMPLE DATA SHEET

LEAD-BASED PAINT SAMPLE DATA SHEET

Area Name:	Sheds #2 and #3
Unit Address:	Former Fulton Gas Works
	Peebles Street
	Richmond, Virginia
Project No	FEI-16AL243

Operator:Andrew BairdRecorder:Andrew BairdRMD Model:LPA-1Serial No.:2610Inspection Date:06/3/16

RMD N				Serial No.: 26				
Calibra	tion Ch	eck To	lerance	Cal. Block Val	ue: 1.0 mg/cm			
	1 st	2 nd	3 rd	Avg.	Diff. between Avg. and Cal. Block			
Entry	1.0	1.0	1.0	1.0	0			
Exit	1.0	1.0	1.0	1.0	0			

Key:

M=metal W=wood G=gypsum P=plaster PC=poured concrete RM=roofing material WP=wood panel C=concrete T=tile B=brick D=drywall CB=concrete block ST=stucco I=Indicates surface is intact N=NON-intact in (%) increments (Deteriorated Paint)

Sample #	Building Component	Paint Color	Sample Location	Sub Type	Surf Cond.	Quick (mg/cm ²)	Pos. Quantity (No. or SF)
1	Wall Trim	Yellow	Interior – Main Area	М	N/10	-0.2	
2	Conduit	Yellow	Interior – Main Area	М	N/60	-0.3	
		-					

For an explanation of the XRF Quick value parameters see the LBP Survey Methodology Section of this Report.