

Asbestos Survey and Limited Lead-Based Paint Survey

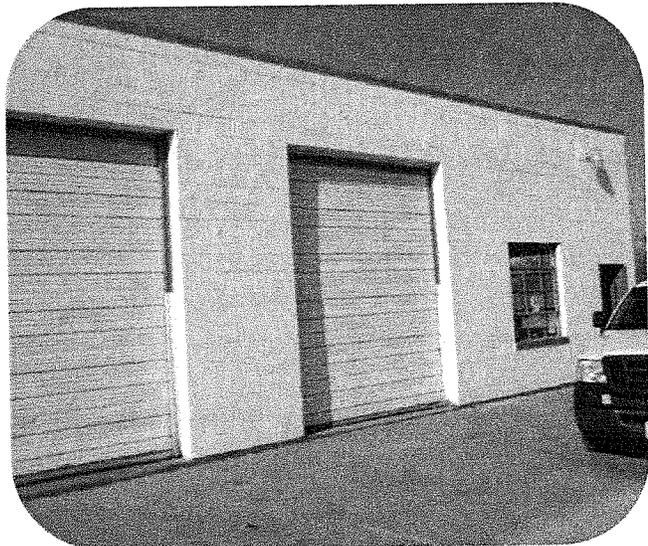
Commercial Building

527 South Main Street

Hannibal, Marion County, Missouri

January 28, 2011

Terracon Project No. 15107089



Prepared for:

City of Hannibal

Hannibal, Missouri

Prepared by:

Terracon Consultants, Inc.

St. Louis, Missouri

Offices Nationwide
Employee-Owned

Established in 1965
terracon.com

Terracon

Geotechnical

Environmental

Construction Materials

Facilities

January 28, 2011



City of Hannibal
320 Broadway
Hannibal, Missouri 63401

Attn: Mr. Jeff LaGarce
P: [573] 221 0111
F: [573] 221 0646
E: jlagarce@hannibal-mo.gov

Re: Asbestos Survey and Limited Lead-Based Paint Survey
Commercial Building
527 South Main Street
Hannibal, Marion County, Missouri
Terracon Project No. 15107089

Dear Mr. LaGarce:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Asbestos Survey and Limited Lead-Based Paint Survey for the above-referenced site. This survey was performed in accordance with the Professional Services Agreement between the City of Hannibal, Missouri and Terracon dated December 7, 2010.

This report contains the results of samples collected and analyzed. Please refer to the attached report for details. Terracon Consultants, Inc. appreciates the opportunity to provide this service to the City of Hannibal. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

Heather Beery
Staff Environmental Scientist

Bryan Gatlin
Project Manager

CR: Gary A. Ganson, CIH, CSP
Senior Consultant



Terracon Consultants, Inc. 11600 Lilburn Park Road, St. Louis, Missouri 63146
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Geotechnical



Environmental



Construction Materials



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**ASBESTOS SURVEY AND
LIMITED LEAD-BASED PAINT SURVEY**

**COMMERCIAL BUILDING
527 SOUTH MAIN STREET
HANNIBAL, MARION COUNTY, MISSOURI**

**Terracon Project No. 15107089
January 28, 2011**

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos survey and limited lead-based paint survey at the commercial building located at 527 South Main Street in Hannibal, Marion County, Missouri. The sampling was conducted on January 5, 2011, in general accordance with the Professional Services Agreement between the City of Hannibal, Missouri and Terracon dated December 7, 2010. The survey included interior and exterior areas of the site building, and consisted of readily visible and accessible building materials.

Asbestos

Samples of suspect asbestos-containing materials (ACM) were collected to determine asbestos content. Sampling was performed in compliance with protocols outlined in EPA regulation 40 CFR 763 (Asbestos Hazard Emergency Response Act, AHERA) and in accordance with the provisions of the Federal National Emission Standard for Hazardous Air Pollutants (NESHAP; 40 CFR 61, Subpart M) and the Missouri Department of Natural Resources (MDNR) under 10 CSR 10-6.241 Asbestos Projects - Registration, Notification, and Performance Requirements. Upon collection, the samples were delivered to an accredited laboratory, EMSL Analytical, Inc. in St. Louis, Missouri, for analysis by polarized light microscopy (PLM) using EPA Method 600/R-93/116 per United States Environmental Protection Agency (EPA) methodology (40 CFR 763, Subpart E).

Lead-Based Paint

Lead-based paint (LBP) is regulated by the Environmental Protection Agency (EPA), Missouri Department of Health (MDOH), and the Occupational Safety and Health Administration (OSHA). The EPA and MDOH regulate lead use, removal, and disposal. The EPA defines LBP as paint, varnish, stain, or other applied coating that contains lead equal to or greater than 1.0 mg/cm², 5,000 mg/kg, or 0.5% by dry weight as determined by laboratory analysis.

1.1 Project Objectives

The objectives of this project were to identify the presence or absence of ACM that may be impacted by the impending demolition activities of the site structures, and the presence or absence of LBP considered sufficiently damaged (e.g., paint which is deteriorated and is delaminating from the painted surface) to result in building demolition waste being classified as hazardous for lead.

Terracon visually assessed the interior and exterior of the site building to observe for the presence of potential damaged LBP.

1.2 Project General Information

Asbestos

EPA regulation 40 CFR 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP) prohibits the release of asbestos fibers to the atmosphere during renovation or demolition activities. The asbestos NESHAP requires that regulated asbestos-containing building materials be identified, classified and quantified prior to planned disturbances or demolition activities. The NESHAP authority for the state of Missouri is Missouri Department of Natural Resources.

Lead-Based Paint

The MDNR Fact Sheet entitled "Disposal of Demolition Wastes Contaminated with Lead or Other Heavy Metals" dated August 2008, provided guidance for the disposal of the following types of waste:

- Paint residue
- Demolition debris, and
- Scrap metal.

The waste disposal requirements depend on the kind of waste disposed and how the owner is regulated. The wastes must be managed and disposed of so as not to adversely affect human health, pose a threat to environment, or create a public nuisance. MDNR indicated there were two classifications of buildings:

- Residential Properties Containing Not More Than four Family Units; and
- Other Structures.

The site building is classified as "Other Structures," which includes multi-family dwellings that are not owner occupied, multi-family dwellings containing more than four family units;

commercial and business enterprises, institutions and industrial buildings, and other structures not specifically identified.

Demolition debris need not be tested prior to disposal, so long as the debris is not chipped, shredded, milled, ground, mulched or similarly processed to enhance their leachability prior to disposal. Unprocessed wastes may be disposed in either a sanitary landfill or a demolition landfill.

Scrap metal should be sent to a salvage yard for recycling.

2.0 BUILDING DESCRIPTION

The site is developed with a one-story, 1,400-square foot, concrete block building atop a concrete floor slab. The site building was constructed around 1950. The interior walls of the shop were painted concrete block. The interior walls of the office included painted concrete block and cement board. The interior walls of the restroom included drywall and skim coat over concrete block. Exterior walls were painted concrete block. The office floor was 12"x12" floor tile over the concrete slab. The bathroom floor was carpet over sheet vinyl flooring over the concrete slab. The roofing system was accessed as part of this survey.

3.0 FIELD ACTIVITIES

The asbestos survey was conducted on January 5, 2011 by Mr. Bryan Gatlin and Ms. Heather Beery, MDNR Certified Asbestos Building Inspectors. Copies of Mr. Gatlin's and Ms. Beery's certificates are attached as Appendix E. The asbestos sampling was conducted consistent with the procedures outlined in our Professional Services Agreement referenced in Section 1.0.

The limited LBP survey was conducted on January 5, 2011 by Mr. Bryan Gatlin, a State of Missouri Licensed lead inspector, to provide the client with information to comply with OSHA requirements for lead-in-air content during disturbance of painted materials. The sampling was not designed to meet the requirements of the U.S. Department of Housing and Urban Development (HUD).

A summary of the field activities is described below.

3.1 Visual Assessment

Terracon began the asbestos sampling activities with a visual assessment, identification and inventory of readily visible and accessible homogeneous areas of suspect ACM. A homogeneous area consists of building materials that appear similar throughout in terms of color, texture and date of application. The interior assessment was conducted throughout

visually accessible areas of the site. Building materials identified as concrete, glass, wood, masonry, metal, plastic or rubber were not considered suspect ACM.

Terracon visually assessed the interior and exterior of the site building to identify construction materials suspect for LBP. Painted/coated surfaces which appear similar throughout in terms of color, texture, substrate and date of application are treated as a homogeneous material for paint chip collection purposes. Painted/coated surfaces were visually assessed for evidence of distress such as delaminating, flaking, or peeling.

3.2 Physical Assessment

Asbestos

A physical assessment of each homogeneous area of suspect ACM was conducted to assess the friability and condition of the materials. A friable material is defined by the EPA as a material which can be crumbled, pulverized or reduced to powder by hand pressure when dry. Friability was assessed by physically touching suspect materials.

Lead-Based Paint

A physical assessment of each painted surface which could be observed was conducted to assess its condition. The painted surfaces were assessed as intact (entire surface intact), fair (less than or equal to 2 square feet of peeling paint on large interior surfaces or 10 square feet on large exterior surfaces), or poor (greater than 2 square feet on large interior surfaces and 10 square feet on large exterior surfaces) condition.

3.3 Sample Collection

Based on results of the visual observation, bulk samples of suspect ACM were collected from the interior and exterior of the subject building. Bulk samples of suspect ACM were collected in general accordance with AHERA sampling protocols using wet methods as applicable to reduce the potential for fiber release. Samples were placed in sealable containers and labeled with unique sample numbers using an indelible marker. A total of twenty one (21) bulk samples were collected from seven (7) homogeneous areas of suspect ACM. The asbestos survey sample summary is provided in Appendix A. The confirmed asbestos-containing materials are tabulated in Appendix B. Although reasonable effort was made to survey accessible suspect materials, additional suspect but un-sampled materials could be located in walls, in voids or in other concealed areas.

Lead-Based Paint

At the request of the client, collection of paint samples was requested for painted surfaces which appeared deteriorated to the extent that demolition debris could be considered hazardous. Due to lack of observed peeling, cracking, or chipping paint, Terracon did not collect samples of painted components for TCLP analysis.

3.4 Sample Analysis

Asbestos

Samples of suspect ACM were delivered under proper chain-of-custody to EMSL Analytical, Inc. (EMSL) of St. Louis, Missouri. EMSL is a laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) under the National Institute of Standards and Technology (NIST) (Lab Code: 200742-0) for analysis by Polarized Light Microscopy (PLM). The percentage of asbestos, where applicable, was determined by microscopical visual estimation. Copies of the analytical reports and chain-of-custody forms are provided in Appendix C.

Lead-Based Paint

Due to lack of observed peeling, cracking, or chipping paint, Terracon did not collect samples of painted components (paint/substrate) for TCLP analysis.

4.0 REGULATORY OVERVIEW

As a consequence of the health hazard from inhalation of asbestos fibers, a body of federal and state regulations has been developed. Federal regulations pertaining to asbestos are included in AHERA (US EPA 40 CFR 763, Subparts E, F); NESHAP (EPA 40 CFR 61); OSHA Asbestos Standards (29 CFR 1910.1001 and 29 CFR 1926.1101), and ASHARA (Asbestos School Hazard Abatement Reauthorization Act). Many states have additional requirements including state-specific licensing and certification. In Marion County, Missouri, asbestos activities are regulated by the Missouri Department of Natural Resources (MDNR) under 10 CSR 10-6.241 Asbestos Projects - Registration, Notification, and Performance Requirements.

Friable ACM, Category I and Category II non-friable ACM which is in poor condition and has become friable or which will be subjected to drilling, sanding, grinding, cutting or abrading and which could be crushed or pulverized during anticipated renovation or demolition activities are considered regulated ACM (RACM). RACM must be removed prior to renovation or demolition activities which will disturb the materials. The owner or operator must provide MDNR with written notification at least 10 working days prior to the commencement of any renovation activity which will include the disturbance of at least 160 square feet, 260 linear

Asbestos Survey and Limited Lead-Based Paint Survey

Commercial Building ■ 527 South Main Street
Terracon Project No. 15107089 ■ January 28, 2011



feet, or one cubic meter of RACM or prior to the commencement of demolition. Removal of RACM must be conducted by a MDNR licensed asbestos abatement contractor. Please note that demolition of any structure, which is defined as removal of a load-bearing member, requires a 10-day notification even when no asbestos is present.

The federal OSHA Asbestos standard for construction (29 CFR 1926.1101) regulates workplace exposure to asbestos. OSHA standards require that employee exposure to airborne asbestos fibers be maintained below 0.1 asbestos fibers per cubic centimeter of air (0.1 f/cc). The OSHA standards classifies construction and maintenance activities which could disturb ACM, and specifies work practices and precautions which employers must follow when engaging in each class of regulated work. However, workers who deliberately disturb any amount of asbestos should have pertinent training and wear proper personal protective equipment according to federal and state regulatory requirements (i.e., OSHA 29 CFR 1926.1101 (g) (1) through (9) for Class I, II and III work).

Lead-Based Paint

The limited LBP survey was performed in accordance with the procedures prescribed in the EPA's work practice standards for conducting lead paint testing (40 CFR 745.227). Lead is regulated by the EPA and OSHA at the federal level and by MDOH at the state level.

The Resource Conservation and Recovery Act (RCRA) gave the USEPA authority to regulate the waste status of demolition and renovation debris, including lead-containing materials. Specific notification and testing requirements must be addressed prior to transporting, treating, storing, or disposing of hazardous wastes. Lead containing wastes are considered hazardous waste under RCRA if Toxicity Characteristic Leaching Procedure (TCLP) results exceed 5 milligrams per liter (mg/L). EPA exempts from most RCRA requirements those generators whose combined hazardous waste generation is less than 100 kilograms (kg) per month.

Detectable lead quantities may constitute a lead dust hazard during renovation/demolition activities. Personnel performing renovation/demolition activities that may disturb painted components with concentrations of lead above the designated analytical detection limit should comply with all current OSHA regulations in order to minimize employee exposure. OSHA regulates construction activities that disturb lead-containing material regardless of the concentration. Currently, any proposed renovation/demolition is subject to the OSHA regulations (29 CFR 1926.62 – Lead Exposure in Construction).

5.0 FINDINGS AND RECOMMENDATIONS

Asbestos

Twenty one samples of suspect ACM were collected from the interior and exterior of the subject building. Laboratory analysis identified asbestos in the following materials:

- Cement board
- Window glazing

It is recommended that the identified ACM at the site be managed in place with an Operations and Maintenance (O&M) Plan. ACM that will be disturbed during future renovation or demolition activities should be properly removed and disposed by a trained and licensed abatement contractor.

The asbestos survey sample summary is provided in Appendix A. Confirmed asbestos-containing materials are summarized in Appendix B and laboratory analytical reports are included in Appendix C. Photographs of sampled materials are provided in Appendix D.

Lead-Based Paint

The interior and exterior painted components were in generally fair to intact condition with evidence of weathering. Terracon did not observe painted components which exhibited deterioration as defined in Section 3.2; and therefore did not collect samples of painted materials for TCLP analysis.

6.0 GENERAL COMMENTS

The asbestos survey and limited lead-based paint survey were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions in the same locale. The results, findings, conclusions and recommendations expressed in this report are based on conditions observed during our sampling of the building. The information contained in this report is relevant to the date on which these samplings were performed, and should not be relied upon to represent conditions at a later date. This report has been prepared on behalf of and exclusively for use by the City of Hannibal for specific application to their project as discussed. This report is not a bidding document. Contractors or consultants reviewing this report must draw their own conclusions regarding further investigation or remediation deemed necessary. Terracon does not warrant the work of regulatory agencies, laboratories or other third parties supplying information which may have been used in the preparation of this report. No warranty, express or implied is made.

APPENDIX A

ASBESTOS SURVEY SAMPLE SUMMARY

ASBESTOS SURVEY SAMPLE SUMMARY
527 SOUTH MAIN STREET, HANNIBAL, MO

Homogeneous Area	Sample No.	Description	Sample Location	Lab Results	Condition
1	1-1	Cement board	Office	19% Chrysotile	Good
	1-2	Cement board	Office	19% Chrysotile	
	1-3	Cement board	Office	19% Chrysotile	
2	2-1	Drywall	Restroom	None Detected	Good
	2-2	Drywall	Restroom	None Detected	
	2-3	Drywall	Restroom	None Detected	
3	3-1	12"x12" floor tile	Office	None Detected	Good
	3-2	12"x12" floor tile	Office	None Detected	
	3-3	12"x12" floor tile	Office	None Detected	
4	4-1	Skim coat on block wall	Restroom	None Detected	Good
	4-2	Skim coat on block wall	Restroom	None Detected	
	4-3	Skim coat on block wall	Restroom	None Detected	
5	5-1	Sheet vinyl flooring	Restroom	None Detected	Good
	5-2	Sheet vinyl flooring	Restroom	None Detected	
	5-3	Sheet vinyl flooring	Restroom	None Detected	
6	6-1	Window glazing	Office	None Detected	Good
	6-2	Window glazing	Office	None Detected	
	6-3	Window glazing	Office	2% Chrysotile	
7	7-1	Roofing (built up)	Roof	None Detected	Good
	7-2	Roofing (built up)	Roof	None Detected	
	7-3	Roofing (built up)	Roof	None Detected	

APPENDIX C

ANALYTICAL LABORATORY DATA

Asbestos • Lead • Environmental • Materials & Indoor Air Analysis

EMSL Analytical, Inc.

3029 S. Jefferson Saint Louis, MO 63118
 Phone: (314) 577-0150 Fax: (314) 776-3313
 Web: Email: saintlouislab@emsl.com

FACSIMILE TRANSMITTAL SHEET

To: Bryan Gattin
 Company: Terracon Consultants, Inc.
 Fax Number: (314) 692-8810
 Phone Number: (314) 692-8811

From: EMSL Analytical, Inc.
 Date: January 17, 2011

PAGES INCLUDING COVER: 9

527 S. MAIN

RE: Analysis Results for Order(s) 391100153

The following report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on the following date(s):
 1/10/2011 9:00:00AM

Notice: This information may contain privileged and confidential information and is solely for the use of the sender's intended recipient(s). If you received this information in error, please notify the sender and delete all copies. Thank you.

EMSL Analytical, Inc. News

EMSL PRODUCTS MONTHLY SPECIALS	<u>Online Training</u>	<u>New Lab Services at EMSL</u>
<p>Air-o-Cell (50pk) \$199.00 PCM Cassettes \$24(10+bx) TEM Cassettes \$39(10+bx)</p> <p><u>PUMP BLOWOUT SALE</u></p>	<p>www.EMSLTraining.com</p> <p>CIE CMI CIAQM Microbiology for the IAQ Professional HVAC for the IAQ Professional</p>	<p>Chinese Drywall Testing Allergens PCB's Rapid Pathogen Detection by Real Time PCR Radon</p>
<p>Product #870610 EMSL H/D Diaphragm Pump \$169</p>	<p><u>Online Sampling Videos</u> www.EMSL.tv</p>	<p><u>Westmont, NJ Lab Open Saturday</u> Asbestos, Lead, and Mold Analysis!</p>
<p>Product #8706105 H/D Diaphragm Pump Kit \$425</p> <p><u>IAQ INSTRUMENT DEALS</u></p>		<p>1-800-220-3675 East Coast 1-888-455-3675 West Coast</p>
<p>Product #8703003 Protimeter Mini Moisture Meter \$175</p>		
<p>Product #8704013 BIOS Defender 510-H \$1299</p>		
<p>Product #8709001</p>		

If you have any questions, please do not hesitate to contact us at (314) 577-0150.

VISIT OUR WEBSITE AT

Please tell us how we are doing by going to the survey at <http://www2.emsl.com/custsurvey/?fromregion=eastcoast>

YOU CAN DOWNLOAD AND PRINT

CERTIFICATIONS OF ACCREDITATIONS AND CHAIN OF CUSTODY FORMS

527 S. MAIN

Chain of Custody
EMSL Order Number (Lab Use Only):

391100153

EMSL ANALYTICAL, INC.
 LABORATORY PRODUCTS TRAINING

Company: <u>TERDACON</u>		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different note Instructions in Comments**	
Street: <u>11600 WILBURN PARK RD</u>		Third Party Billing requires written authorization from third party	
City: <u>ST LOUIS</u>	State/Province: <u>MO</u>	Zip/Postal Code: <u>63146</u>	Country:
Report To (Name): <u>BRYAN GATLIN</u>		Fax #: <u>314-692-8810</u>	
Telephone #: <u>314-692-8811</u>		Email Address: <u>3</u>	
Project Name/Number: <u>FW000 BUYOUT -1510 7089</u>			
Please Provide Results: <input type="checkbox"/> Fax <input type="checkbox"/> Email		Purchase Order:	U.S. State Samples Taken: <u>MO</u>

Turnaround Time (TAT) Options* - Please Check

3 Hour 6 Hour 24 Hour 48 Hour 72 Hour 96 Hour 1 Week 2 Week

*For RUSH TAT's Please Call Ahead to Confirm Lab Hours and Availability. Not all TAT options are valid for every test.
 Materials Science and IAQ TATs are in Business Days rather than Hours (i.e. 24 Hour = End of Next Business Day)

Asbestos

PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ 8hr. TWA TEM - Air <input type="checkbox"/> 4-4.5hr TAT (AHERA ONLY) <input type="checkbox"/> AHERA 40 CFR, Part 763 <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> EPA Level II <input type="checkbox"/> ISO 10312 TEM - Water Fibers ≥10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	PLM - Bulk <input checked="" type="checkbox"/> PLM EPA 800/R-93/116 <input type="checkbox"/> PLM EPA NOB (<1%) <input type="checkbox"/> NYS 198.1 (friable-NY) <input type="checkbox"/> NYS 198.6 (non-friable-NY) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/ Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%)	TEM - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP Soil/Rock/Vermiculite <input type="checkbox"/> PLM CARB 435 - A (0.25% sensitivity) <input type="checkbox"/> PLM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> TEM CARB 435 - B (0.1% sensitivity) <input type="checkbox"/> EPA Reg. I Screening Protocol (Qualitative) Other:
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Lead (Pb)

Flame Atomic Absorption <input type="checkbox"/> Chips SW846-7000B or AOAC 974.02 <input type="checkbox"/> Soil SW846-7000B/7420 <input type="checkbox"/> Air NIOSH 7082 <input type="checkbox"/> Wastewater SM3111B or SW846-7000B/7420 <input type="checkbox"/> ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> non ASTM Wipe SW846-7000B/7420 <input type="checkbox"/> TCLP SW846-1311/7420/SM 3111B	ICP <input type="checkbox"/> Air NIOSH 7300 Modified <input type="checkbox"/> non ASTM Wipe SW846-6010B or C <input type="checkbox"/> ASTM Wipe SW846-6010B or C <input type="checkbox"/> Soil SW846-6010 B or C <input type="checkbox"/> Waste Water SW846-6010B or C <input type="checkbox"/> TCLP SW846-6010B or C
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Materials Science

Common Particle ID (large particles)
 Full Particle ID (environmental dust)
 Basic Material ID (solids)
 Advanced Material ID
 Physical Testing (Tensile, Compression)
 Combustion-by-products (soot, char, etc.)
 X-Ray Fluorescence (elem. analysis)
 X-Ray Diffraction (Crystalline Part.)
 MMVF's (Fibrous glass, RCF's)
 Particle Size (sieve/microscopy/laser)
 Combustible Dust
 Petrographic Examination
 Other:

Graphite Furnace Atomic Absorption

Soil SW846-7421 Wastewater EPA 200.9
 Air NIOSH 7105 Drinking Water EPA 200.9

Other:

Microbiology

Wipe and Bulk Samples <input type="checkbox"/> Mold & Fungi - Direct Examination <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi Culture (Genus & Species) <input type="checkbox"/> Bacterial Count & ID (Up to Three Types) <input type="checkbox"/> Bacterial Count & ID (Up to Five Types) <input type="checkbox"/> MRSA <input type="checkbox"/> Pseudomonas aeruginosa	Air Samples <input type="checkbox"/> Mold & Fungi (Spore Trap) <input type="checkbox"/> Mold & Fungi Culture (Genus Only) <input type="checkbox"/> Mold & Fungi (Genus & Species) <input type="checkbox"/> Bacterial Culture & ID (Up to Three Types) <input type="checkbox"/> Bacterial Culture & ID (Up to Five Types) <input type="checkbox"/> Endotoxin Testing Real Time Q-PCR (See Analytical Guide for Code) Code:
Water Samples <input type="checkbox"/> Total Coliform & E.coli (P/A) <input type="checkbox"/> Fecal Coliform (SM 9222D) <input type="checkbox"/> Sewage Screen <input type="checkbox"/> Heterotrophic Plate Count (SM 9215)	Legionella <input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 Other: <input type="checkbox"/>

IAQ

Nuisance Dust NIOSH 0500 0600
 Airborne Dust PM10 TSP
 Silica Analysis: All Species
 Silica Analysis - Single Species
 Alpha Quartz Cristobalite Tridymite
 HVAC Efficiency
 Carbon Black
 Airborne Oil Mist
 Radon Testing: Call for Kit and COC
 Other:

**Comments/Special Instructions:

Client Sample #'s	Total # of Samples: <u>21</u>
Relinquished (Client): <u>[Signature]</u>	Date: <u>1-17-11</u>
Received (Lab): <u>[Signature]</u>	Date: <u>1-20-11</u>
	Time: <u>3pm</u>
	Time: <u>9:00 AM</u>

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide
 Controlled Document - OneChain 02-1122010

Chain of Custody
EMSL Order Number (Lab Use Only):

527 S. MAIN
 10F2

39100153

EMSL ANALYTICAL, INC.
 LABORATORY PRODUCTS TRAINING

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
1-1	CEMENT BOARD OFFICE		
-2	↓ "		
-3	↓ "		
2-1	DRYWALL RESTROOM		
-2	↓ "		
-3	↓ "		
3-1	12"x12" FLOOR TILE w/ OFFICE		
-2	↓ "		
-3	↓ "		
4-1	SICIM COAT ON BLOCK WALL BATHROOM		
-2	↓ "		
-3	↓ "		
5-1	SHEET VINYL FLOORING RESTROOM		
-2	↓ "		
-3	↓ "		
6-1	WINDOW GLAZING OFFICE		
*Comments/Special Instructions:			

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide

Chain of Custody
EMSL Order Number (Lab Use Only):

527 S. MAIN

391100153

2 of 2

EMSL ANALYTICAL INC.
 LABORATORY PRODUCTS TRADING

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
6-2	WINDOW GLAZING SHOP		
-3	↓ SHOP		
7-1	ROOFING (BUILT-UP) ROOF		
-2	↓ "		
-3	↓ "		
*Comments/Special Instructions:			

Analysis Completed in Accordance with EMSL's Terms and Conditions located in the Analytical Price Guide



EMSL Analytical, Inc.
 3029 S. Jefferson, Saint Louis, MO 63113

Phone: (314) 677-0150 Fax: (314) 776-3443 Email: saintlouislab@emsl.com

Attn: Bryan Gatlin
Terracon Consultants, Inc.
11600 Lilburn Park Road

Customer ID: TERR57
 Customer PO:
 Received: 01/10/11 9:00 AM
 EMSL Order: 391100153

Saint Louis, MO 63146

Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: **Flood Buyout - 15107089 / 527 S. Main**

EMSL Proj:
 Analysis Date: 1/17/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
1-1 391100153-0001		Various Non-Fibrous Heterogeneous		81% Non-fibrous (other)	19% Chrysotile
1-2 391100153-0002		Various Non-Fibrous Heterogeneous		81% Non-fibrous (other)	19% Chrysotile
1-3 391100153-0003		Various Non-Fibrous Heterogeneous		81% Non-fibrous (other)	19% Chrysotile
2-1-Joint Compound 391100153-0004		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
2-1-Drywall 391100153-0004A		Various Non-Fibrous Heterogeneous	22% Cellulose	78% Non-fibrous (other)	None Detected
2-2-Joint Compound 391100153-0005		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
2-2-Drywall 391100153-0005A		Various Non-Fibrous Heterogeneous	22% Cellulose	78% Non-fibrous (other)	None Detected

Initial report from 01/17/2011 15:35:59

Analyst(s)

Sue Ferrario (30)

Jeff Siria, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. 3029 S. Jefferson, Saint Louis MO NVLAP Lab Code 200742-0



EMSL Analytical, Inc.
 3029 S. Jefferson, Saint Louis, MO 63118

Phone: (314) 577-0150 Fax: (314) 770-3613 Email: saintlouislab@emsl.com

Attn: **Bryan Gatlin**
Terracon Consultants, Inc.
11600 Lilburn Park Road

Saint Louis, MO 63146

Customer ID: TERR57
 Customer PO:
 Received: 01/10/11 9:00 AM
 EMSL Order: 391100153

Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: Flood Buyout - 15107089 / 527 S. Main

EMSL Proj:
 Analysis Date: 1/17/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
2-3-Joint Compound 391100153-0006		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
2-3-Drywall 391100153-0006A		Various Non-Fibrous Heterogeneous	22% Cellulose	78% Non-fibrous (other)	None Detected
3-1-Linoleum 391100153-0007		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
3-1-Adhesive 391100153-0007A		Clear Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
3-2-Linoleum 391100153-0008		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
3-2-Adhesive 391100153-0008A		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
3-3-Linoleum 391100153-0009		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

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Samples analyzed by EMSL Analytical, Inc. 3029 S. Jefferson, Saint Louis MO NVLAP Lab Code 200742-0



EMSL Analytical, Inc.
 3020 S. Jefferson, Saint Louis, MO 63110
 Phone: (314) 677-8150 Fax: (314) 778-3313 Email: saintlouislam@emsl.com

Attn: **Bryan Gatlin**
Terracon Consultants, Inc.
11600 Lilburn Park Road

Customer ID: TERR57
 Customer PO:
 Received: 01/10/11 9:00 AM
 EMSL Order: 391100153

Saint Louis, MO 63146

Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: **Flood Buyout - 15107089 / 527 S. Main**

EMSL Proj:
 Analysis Date: 1/17/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
3-3-Adhesive 391100153-0009A		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
4-1 391100153-0010		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
4-2 391100153-0011		Cream Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
4-3 391100153-0012		Cream Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
5-1-Linoleum 391100153-0013		Various Non-Fibrous Heterogeneous	14% Glass	86% Non-fibrous (other)	None Detected
5-1-Adhesive 391100153-0013A		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
5-2-Linoleum 391100153-0014		Various Non-Fibrous Heterogeneous	14% Glass	86% Non-fibrous (other)	None Detected

Initial report from 01/17/2011 15:35:59

Analyst(s)

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 Samples analyzed by EMSL Analytical, Inc. 3029 S. Jefferson, Saint Louis MO NVLAP Lab Code 200742-0



EMSL Analytical, Inc.

3029 S. Jefferson, Saint Louis, MO 63113

Phone: (314) 677-4150 Fax: (314) 776-3313 Email: saintlouislab@emsl.com

Attn: Bryan Gatlin
Terracon Consultants, Inc.
11600 Lilburn Park Road

Customer ID: TERR57
 Customer PO:
 Received: 01/10/11 9:00 AM
 EMSL Order: 391100153

Saint Louis, MO 63146

Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: **Flood Buyout - 15107089 / 527 S. Main**

EMSL Proj:
 Analysis Date: 1/17/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
5-2-Adhesive 391100153-0014A		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
5-3-Linoleum 391100153-0015		Various Non-Fibrous Heterogeneous	14% Glass	86% Non-fibrous (other)	None Detected
5-3-Adhesive 391100153-0015A		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
6-1 391100153-0016		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
6-2 391100153-0017		Cream Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
6-3 391100153-0018		Gray Non-Fibrous Heterogeneous		98% Non-fibrous (other)	2% Chrysotile
7-1 391100153-0019		Black Non-Fibrous Heterogeneous	19% Cellulose	81% Non-fibrous (other)	None Detected

Initial report from 01/17/2011 15:35:59

Analyst(s)

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Jeff Siria, Laboratory Manager
 or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. 3029 S. Jefferson, Saint Louis MO NVLAP Lab Code 200742-0



EMSL Analytical, Inc.
 3029 S. Jefferson, Saint Louis, MO 63118
 Phone: (314) 577-9159 Fax: (314) 776-3313 Email: saintlouislabs@emsl.com

Attn: Bryan Gatlin
Terracon Consultants, Inc.
11600 Lilburn Park Road
Saint Louis, MO 63146

Customer ID: TERR57
 Customer PO:
 Received: 01/10/11 9:00 AM
 EMSL Order: 391100153

Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: Flood Buyout - 15107089 / 527 S. Main

EMSL Proj:
 Analysis Date: 1/17/2011

Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
7-2 391100153-0020		Black Non-Fibrous Heterogeneous	19% Cellulose	81% Non-fibrous (other)	None Detected
7-3 391100153-0021		Black Non-Fibrous Heterogeneous	19% Cellulose	81% Non-fibrous (other)	None Detected

Initial report from 01/17/2011 15:35:59

Analyst(s)

Sue Ferrario (30)

Jeff Siria, Laboratory Manager
 or other approved signatory

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 Samples analyzed by EMSL Analytical, Inc. 3029 S. Jefferson, Saint Louis MO NVLAP Lab Code 200742-0

APPENDIX D
PHOTOGRAPHS



Photo #1 View of exterior of site building



Photo #2 HA 3 – 12"x12" floor tile in office



Photo #3 HA 6 – window glazing

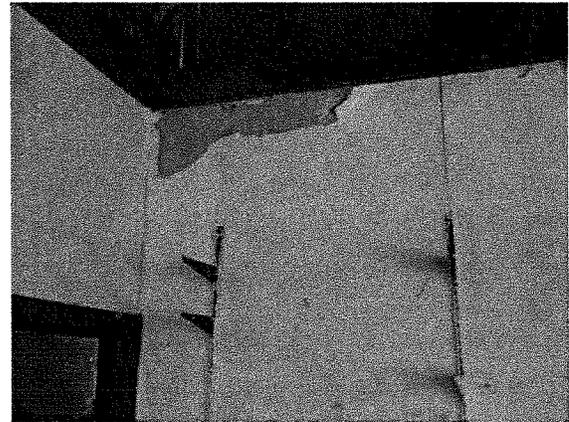


Photo #4 HA 1 – cement board in office

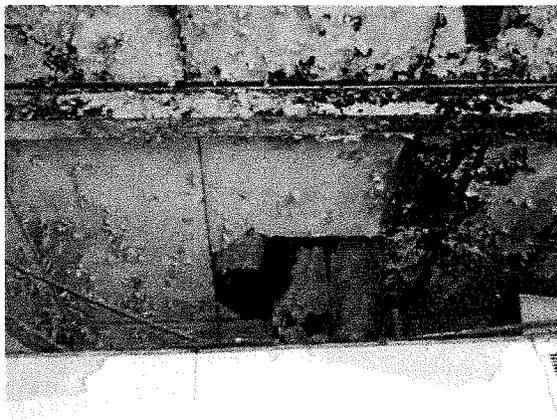


Photo #5 View of interior ceiling with flaking paint



Photo #6 HA 5 – sheet vinyl flooring in restroom

Asbestos Survey and Limited Lead Based Paint Survey
Terracon Project No. 15107089
Commercial Building, 527 South Main Street, Hannibal, MO
Date Photos Taken: January 5, 2011

Terracon
Consulting Engineers & Scientists

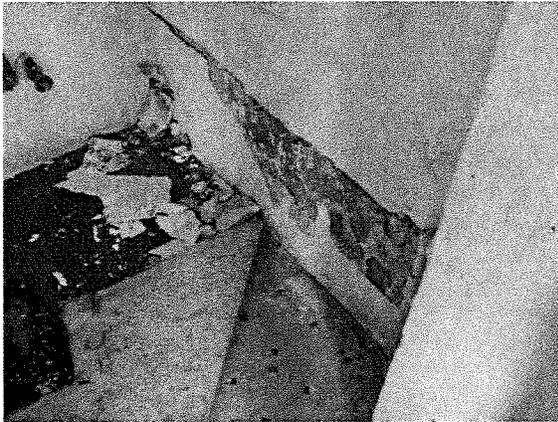


Photo #7 HA 4 – skim coat on block wall of restroom and HA – 2 drywall in restroom



Photo #8 View shop



Photo #9 HA 7 – roofing (built-up)

APPENDIX E
CERTIFICATIONS

Expiration Date: 1/18/2012

Certificate Number: 7112121710MOIR5258

Training Date: 12/17/2010

Missouri State Certificate for Asbestos Related Occupations

issued by Department of Natural Resources

P.O. Box 176

Jefferson City, MO 65102

Phone (573) 751-4817

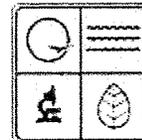
Bryan N. Gatlin

has successfully completed the requirements for certification as a INSPECTOR. This Missouri State Certification is subject to review and the director may deny, suspend or revoke the certification per RSMo chapter 643.230.

1/18/2011

Date


Director of Air Pollution Control Program



**STATE OF MISSOURI
DEPARTMENT OF HEALTH AND SENIOR SERVICES**

LEAD OCCUPATION LICENSE REGISTRATION

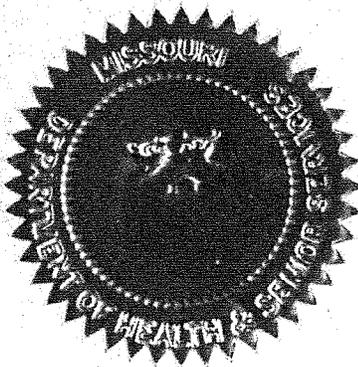
Issued to:

BRYAN GATLIN

The person, firm or corporation whose name appears on this certificate has fulfilled the requirements for licensure as set forth in the Missouri Revised Statutes 701.300-701.338, as long as not suspended or revoked, and is hereby authorized to engage in the activity listed below.

Lead Inspector
Category of License

Issuance Date: 11/19/2009
Expiration Date: 11/19/2011
License Number: 971119-200033535



A handwritten signature in cursive script that reads "Margaret T. Donnelly".

Margaret T. Donnelly
Director

Department of Health and Senior Services

Expiration Date: **4/8/2011**

Certificate Number: 7112032410MOI14486

Training Date: **3/24/2010**

Missouri State Certificate for Asbestos Related Occupations

issued by Department of Natural Resources

P.O. Box 176

Jefferson City, MO 65102

Phone (573) 751-4817

Heather L. Beery

has successfully completed the requirements for certification as a INSPECTOR. This Missouri State Certification is subject to review and the director may deny, suspend or revoke the certification per RSMo chapter 643.230.

4/8/2010

Date


Director of Air Pollution Control Program

