

Asbestos Survey and Limited Lead-Based Paint Survey

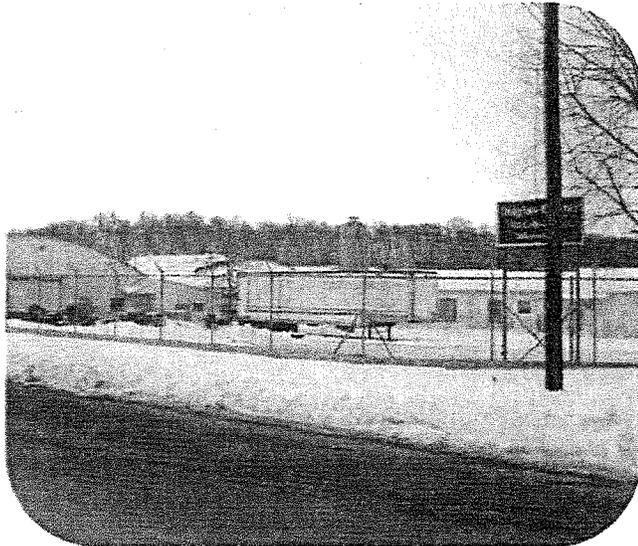
The Display Center

929 Warren Barrett

Hannibal, Marion County, Missouri

February 16, 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

February 16, 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
The Display Center
929 Warren Barrett
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.

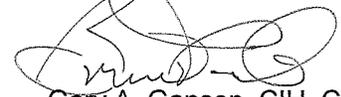
This report contains the results of samples collected and analyzed. Please refer to the attached report for details. Terracon Consultants, Inc. appreciates the opportunity to provide this service to the City of Hannibal. If there are any questions regarding this report or if we may be of further assistance,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

Sincerely,
Terracon Consultants, Inc.

Heather Beery
Staff Environmental Scientist



Bryan Gatlin
Project Manager



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

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

**THE DISPLAY CENTER
929 WARREN BARRETT
HANNIBAL, MARION COUNTY, MISSOURI**

**Terracon Project No. 15107089
February 16, 2011**

1.0 INTRODUCTION

Terracon Consultants, Inc. (Terracon) conducted an asbestos survey and limited lead-based paint survey at The Display Center located at 929 Warren Barrett in Hannibal, Marion County, Missouri. The sampling was conducted on February 7, 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 Objective

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/peeling to result in building demolition waste being classified as hazardous for lead.

Terracon visually assessed the interior and exterior of the site buildings to observe for the presence of potential damaged LBP. Terracon did not observe areas of significant cracking, peeling, or chipping. Painted components were generally in fair to good condition. Due to the lack of significant cracked or peeling painted components, Terracon did not collect samples of painted components (paint/substrate) for TCLP analysis.

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 (MDNR).

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

Asbestos Survey and Limited Lead-Based Paint Survey

The Display Center ■ 929 Warren Barrett

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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 several buildings, which total approximately 90,130 square feet. The buildings were reportedly constructed in 1940 as separate industrial / warehouse structures and subsequent passageways have since connected the buildings. One chemical vault was reportedly constructed in 1994.

The industrial / warehouse structures are primarily brick/concrete block structures with concrete floors and metal roofs. Office areas are finished with drywall walls, suspended ceiling tiles, and ceramic tiles or vinyl floor tiles. A built-up asphalt type roof is located over the former conveyor / gas dryer building.

3.0 FIELD ACTIVITIES

The asbestos survey was conducted on February 7, 2011 by Mr. Bryan Gatlin, MDNR Certified Asbestos Building Inspector. A copy of Mr. Gatlin's certificate is 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 February 7, 2011 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 buildings 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, flaking, and/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 selected painted surface was conducted to assess its condition. The painted surfaces were assessed as good, fair or poor condition depending on degree of cracking, peeling or chipping.

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 buildings. 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. Suspect asbestos-containing materials were not identified in Building A during the visual assessment; therefore, no samples were collected from Building A. A total of forty-two (42) bulk samples were collected from fifteen (15) 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 exhibited significant cracking, peeling, or chipping to the extent that demolition debris could be considered hazardous. Due to lack of significant damaged or peeling paint, Terracon did not collect samples of painted components (paint/substrate) 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

Terracon did not observe areas of significant cracking, peeling, or chipping paint in the interior or exterior of the buildings; therefore, no samples of paint/substrate material were collected.

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

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The Display Center ■ 929 Warren Barrett

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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 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).

Contractors and employers are required to comply with 29 CFR 1926.62. Construction work covered by OSHA standards includes any repair or renovation activities or other activities that

disturb in-place lead-containing materials, but does not include routine cleaning and repainting where there is insignificant damage, wear, or corrosion of existing lead-containing coatings or substrates. Employers must assure that no employee will be exposed to lead at concentrations greater than 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) averaged over an eight-hour period without adequate protection. The OSHA Standards also establish an action level of $30 \mu\text{g}/\text{m}^3$, which if exceeded, triggers the requirement for medical monitoring. The OSHA standard does not define the amount of lead in paint that constitutes lead based paint. OSHA regulates paint with lead levels equal to or exceeding 0.06% by weight. A negative exposure assessment per trigger task should be conducted to determine if field levels are below the required OSHA action and permissible levels.

5.0 FINDINGS AND RECOMMENDATIONS

Asbestos

Forty-two (42) samples of suspect ACM were collected from The Display Center. Laboratory analysis identified asbestos in the following materials:

- Window glazing – Old Bus Barn, Loading Dock, North wall of Pattern Shop
- Window glazing – South warehouse

The following material was not sampled but was assumed to contain asbestos:

- Cement pipe – South warehouse
- Built-up roof – Conveyor / Gas Dryer Building

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 construction or demolition activities should be properly removed and disposed by a trained and licensed abatement contractor. The roofing material can remain on the Conveyor building during demolition. Category Non-friable I Asphalt roofing material is not regulated by the Missouri Department of Natural Resources (MDNR) as long as the material is in good condition and is not made friable during removal or demolition.

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 good condition with evidence of weathering. Terracon did not observe painted components which exhibited significant cracking, chipping, or peeling; 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 buildings. 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
THE DISPLAY CENTER, 929 WARREN BARRETT, HANNIBAL, MO

Homogeneous Area	Sample No.	Description	Sample Location	Lab Results	Condition
1	1-1	Drywall and joint compound	Office	None Detected	Good
	1-2	Drywall and joint compound	Office	None Detected	
	1-3	Drywall and joint compound	Office	None Detected	
2	2-1	12" x' 12" gray floor tile	Office	None Detected	Good
	2-2	12" x' 12" gray floor tile	Office	None Detected	
	2-3	12" x' 12" gray floor tile	Office	None Detected	
3	3-1	12" x' 12" gray floor tile black mastic	Office	None Detected	Good
	3-2	12" x' 12" gray floor tile black mastic	Office	None Detected	
	3-3	12" x' 12" gray floor tile black mastic	Office	None Detected	
4	4-1	Texture on drywall ceiling	Offices	None Detected	Good
	4-2	Texture on drywall ceiling	Offices	None Detected	
	4-3	Texture on drywall ceiling	Offices	None Detected	
5	5-1	Ceramic tile brown mastic	restrooms	None Detected	Good
	5-2	Ceramic tile brown mastic	restrooms	None Detected	
	5-3	Ceramic tile brown mastic	restrooms	None Detected	
6	6-1	Wall plaster	Pattern Shop	None Detected	Good
	6-2	Wall plaster	Pattern Shop	None Detected	
	6-3	Wall plaster	Pattern Shop	None Detected	
7	7-1	Wall plaster	Silk screening	None Detected	Good
	7-2	Wall plaster	Silk screening	None Detected	Good
	7-3	Wall plaster	Silk screening	None Detected	Good
8	8-1	Drywall and joint compound	Spray booth	None Detected	Good
	8-2	Drywall and joint compound	Spray booth	None Detected	Good
	8-3	Drywall and joint compound	Cafeteria	None Detected	Good

9	9-1	2' x 4' ceiling tile	Pattern room Office	None Detected	Good
	9-2	2' x 4' ceiling tile	Pattern room Office	None Detected	Good
	9-3	2' x 4' ceiling tile	Pattern room Office	None Detected	Good
10	10-1	12" x 12" gold floor tile	Pattern Room Office	None Detected	Good
	10-2	12" x 12" gold floor tile	Pattern Room Office	None Detected	Good
	10-3	12" x 12" gold floor tile	Pattern Room Office	None Detected	Good
11	11-1	12" x 12" gold floor tile clear mastic	Pattern Room Office	None Detected	Good
	11-2	12" x 12" gold floor tile clear mastic	Pattern Room Office	None Detected	Good
	11-3	12" x 12" gold floor tile clear mastic	Pattern Room Office	None Detected	Good
12	12-1	Window glazing	Old Bus Barn, Loading Dock, North Wall Pattern Shop and Vacuum Forming	None Detected	Good
	12-2	Window glazing	Old Bus Barn, Loading Dock, North Wall Pattern Shop and Vacuum Forming	4% Chrysotile	Good
	12-3	Window glazing	Old Bus Barn, Loading Dock, North Wall Pattern Shop and Vacuum Forming	4% Chrysotile	Good
13	13-11	Wall panel brown mastic	Cafeteria restrooms	None Detected	Good
	13-22	Wall panel brown mastic	Cafeteria restrooms	None Detected	Good
	13-33	Wall panel brown mastic	Cafeteria restrooms	None Detected	Good
14	Not Sampled	Cement pipe	South Warehouse	Assumed	Good
15	15-1	Window glazing	South Warehouse	None Detected	Good
	15-2	Window glazing	South Warehouse	4% Chrysotile	Good
	15-3	Window glazing	South Warehouse	None Detected	Good
16	Not Sampled	Built up roof	Conveyor / gas dryer room	Assumed	Good

APPENDIX B

CONFIRMED ASBESTOS-CONTAINING MATERIAL

CONFIRMED AND ASSUMED ASBESTOS-CONTAINING MATERIAL

**THE DISPLAY CENTER
929 WARREN BARRETT
HANNIBAL, MARION COUNTY, MISSOURI
Terracon Project No. 15107089**

CONFIRMED ASBESTOS-CONTAINING MATERIAL

HA No.	Description	Material Location	Percent/Type Asbestos	NESHAP Classification	Condition	Estimated Quantity
12	Window glazing	Old Bus Barn, Loading Dock, North Wall Pattern Shop and Vacuum Forming	4% Chrysotile	Category II non-friable	Good	1,000 LF
14	Cement pipe	South Warehouse	Assumed	Category I non-friable	Good	10 LF
15	Window glazing	South Warehouse	4% Chrysotile	Category II non-friable	Good	1,400 LF
16	Roofing	Conveyor / Gas Dryer Building	Assumed	Category I non-friable	Good	5,300 SF

SF = Square feet

LF = Linear feet

C = Chrysotile asbestos

APPENDIX C

ANALYTICAL LABORATORY DATA



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

391100750

EMSL ANALYTICAL, INC.
 3029 S. JEFFERSON AVE.
 ST. LOUIS, MO 63118
 PHONE: (314) 577-0150
 FAX: (314) 776-3313

Company: TERRALON		EMSL-Bill to: <input type="checkbox"/> Same <input type="checkbox"/> Different <small>"If Bill to is Different note instructions in Comments"</small>	
Street: 11600 LILBURN PARK RD		Third Party Billing requires written authorization from third party	
City: ST LOUIS	State/Province: MO	Zip/Postal Code: 63146	Country:
Report To (Name): BRYAN GATLIN		Fax #: 314-692-8810	
Telephone #: 314-692-8811		Email Address:	
Project Name/Number: 150 15107089		U.S. State Samples Taken: MO	
Please Provide Results: <input checked="" type="checkbox"/> Fax <input type="checkbox"/> Email <input type="checkbox"/> Purchase Order:			
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hours <input type="checkbox"/> 6 Hours <input type="checkbox"/> 24 Hrs <input type="checkbox"/> 48 Hrs <input type="checkbox"/> 3 Days <input type="checkbox"/> 4 Days <input checked="" type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days			
<small>*For TEM Air 3 hours/5 hours, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.</small>			
PCM - Air <input type="checkbox"/> NIOSH 7400 <input type="checkbox"/> w/ OSHA 8hr. TWA PLM - Bulk (reporting limit) <input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) 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%) <input type="checkbox"/> NYS 198.1 (friable in NY) <input type="checkbox"/> NYS 198.6 NOB (non-friable-NY) <input type="checkbox"/> NIOSH 9002 (<1%)	TEM - Air <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 - Bulk <input type="checkbox"/> TEM EPA NOB <input type="checkbox"/> NYS NOB 198.4 (non-friable-NY) <input type="checkbox"/> Chatfield SOP <input type="checkbox"/> TEM Mass Analysis-EPA 600 sec. 2.5 TEM - Water: EPA 100.2 Fibers >10µm <input type="checkbox"/> Waste <input type="checkbox"/> Drinking All Fiber Sizes <input type="checkbox"/> Waste <input type="checkbox"/> Drinking	TEM - Dust <input type="checkbox"/> Microvac - ASTM D 5755 <input type="checkbox"/> Wipe - ASTM D6480 <input type="checkbox"/> Carpet Sonication (EPA 600/J-93/167) 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"/> TEM CARB 435 - C (0.01% sensitivity) <input type="checkbox"/> EPA Protocol (Semi-Quantitative) <input type="checkbox"/> EPA Protocol (Quantitative) Other: <input type="checkbox"/>	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group			
Samplers Name:		Samplers Signature:	
Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
	<i>see attached</i>		
Client Sample # (s):	-	Total # of Samples:	42
Relinquished (Client):	<i>[Signature]</i>	Date: 2-8-11	Time: 11:45 AM
Received (Lab):	<i>[Signature]</i>	Date: 2/8/11	Time: 11:45 AM
Comments/Special Instructions:			

EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS TRAINING

391100750

929 WARREN BARRETT 1 of 3

VVESIMONI, NJ 08108
PHONE: (856) 858-4800
FAX: (856) 858-4960

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
929 1-1	DRYWALL + JOINT COMPOUND OFFICE		
-2	↓ OFFICE		
-3	↓ OFFICE		
929 -2-1	12" x 12" BLUE/GRAY FLOOR TILE OFFICE		
-2	↓ OFFICE		
-3	↓ OFFICE		
929 -3-1	12" x 12" BLUE/GRAY TILE BLACK MORTAR OFFICE		
-2	↓ OFFICE		
-3	↓ OFFICE		
929 -4-1	TEXTURE ON DRYWALL OFFICE CLG		
-2	↓ OFFICE CLG		
-3	↓ OFFICE CLG		
929 -5-1	BROWN MORTAR ON CERAMIC TILES RESTROOM		
-2	↓ "		
-3	↓ "		
929 -6-1	WALL PLASTER COATING PATTERN SHOP		
*Comments/Special Instructions:			

EMEL ANALYTICAL, INC.
LABORATORY PRODUCTS DIVISION

391100750

WESTMONT, NJ 08108

PHONE: (856) 858-4800

FAX: (856) 858-4960

929 WARREN BARRETT 2 of 3

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
929 6-2	WALL PLASTER CONTING PATTEREN SHOP		
-3	↓	"	
929 7-1	WALL PLASTER SILK SCREEN		
-2	↓	"	
-3	↓	"	
929-8-1	DRYWALL + JOINT COMPOUND SPRAY ROOM		
-2	↓	"	
-3	↓	"	
929-9-1	2'x4' CEILING TILE PATTEREN RM OFFICE		
-2	↓	"	
-3	↓	"	
929-10-1	12"x12" WHITE/GOLD FLOOR TILE PATTEREN RM OFFICE		
-2	↓	"	
-3	↓	"	
929-11-1	12"x12" WHITE/GOLD TILE CLEAR MORTAR PATTEREN RM OFFICE		
-2	↓		
*Comments/Special Instructions:			

391100750

929 WARRREN BARRETT 3 of 3

Additional Pages of the Chain of Custody are only necessary if needed for additional sample information

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
929-11-3	12" x 12" WHITE/GOLD TILE CLEAR MASTIC POTTERY RA OFFICE		
929-12-1	WINDOW GLAZING OLD BUS BARN		
-2	↓	"	
-3	↓	"	
929-13-1	WALL PANEL BROWN MASTIC CAFETERIA RESTROOMS		
-2	↓	"	
-3	↓	"	
929-14	CEMENT ASBESTOS PIPE NO SAMPLES COLLECTED - ASSUMED		
929-15-1	WINDOW GLAZING WHSE		
-2	↓	"	
-3	↓	"	
929-16	BUILT-UP ROOF NO SAMPLES COLLECTED - ASSUMED		
*Comments/Special Instructions:			



EMSL Analytical, Inc.
 3029 S. Jefferson, Saint Louis, MO 63113
 Phone: (314) 617-0150 Fax: (314) 776-3113 Email: saintlouislab@emsl.com

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

Customer ID: TERR57
 Customer PO:
 Received: 02/08/11 11:45 AM
 EMSL Order: 391100750

Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: 15107089 - 929 Warren Barrett

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-1-1-Joint Compound 391100750-0001		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
929-1-1-Drywall 391100750-0001A		Various Non-Fibrous Heterogeneous	9% Cellulose 17% Glass	74% Non-fibrous (other)	None Detected
929-1-2-Joint Compound 391100750-0002		White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-1-2-Drywall 391100750-0002A		Various Non-Fibrous Heterogeneous	9% Cellulose 17% Glass	74% Non-fibrous (other)	None Detected
929-1-3-Joint Compound 391100750-0003		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
929-1-3-Drywall 391100750-0003A		Various Non-Fibrous Heterogeneous	9% Cellulose 17% Glass	74% Non-fibrous (other)	None Detected

Initial report from 02/15/2011 09:11:45

Analyst(s)

Sue Ferrario (48)

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



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Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: 15107089 - 929 Warren Barrett

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-2-1 391100750-0004		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-2-2 391100750-0005		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-2-3 391100750-0006		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-3-1 391100750-0007		Black Non-Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
929-3-2 391100750-0008		Black Non-Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
929-3-3 391100750-0009		Black Non-Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
929-4-1 391100750-0010		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected

Initial report from 02/15/2011 09:11:45

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



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Customer ID: TERR57
 Customer PO:
 Received: 02/08/11 11:45 AM
 EMSL Order: 391100750

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-4-2 391100750-0011		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
929-4-3 391100750-0012		Various Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
929-5-1 391100750-0013		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-5-2 391100750-0014		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-5-3 391100750-0015		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-6-1 391100750-0016		Green Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-6-2 391100750-0017		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

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 Project: 15107089 - 929 Warren Barrett

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-6-3 391100750-0018		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-7-1 391100750-0019		Various Non-Fibrous Heterogeneous		71% Non-fibrous (other) 29% Quartz	None Detected
929-7-2 391100750-0020		Various Non-Fibrous Heterogeneous		71% Non-fibrous (other) 29% Quartz	None Detected
929-7-3 391100750-0021		Various Non-Fibrous Heterogeneous		71% Non-fibrous (other) 29% Quartz	None Detected
929-8-1-Joint Compound 391100750-0022		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
929-8-1-Drywall 391100750-0022A		Various Non-Fibrous Heterogeneous	9% Cellulose 17% Glass	74% Non-fibrous (other)	None Detected

Initial report from 02/15/2011 09:11:45

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Customer ID: TERR57
 Customer PO:
 Received: 02/08/11 11:45 AM
 EMSL Order: 391100750

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-8-2-Joint Compound 391100750-0023		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
929-8-2-Drywall 391100750-0023A		Various Non-Fibrous Heterogeneous	9% Cellulose 17% Glass	74% Non-fibrous (other)	None Detected
929-8-3-Joint Compound 391100750-0024		White Non-Fibrous Heterogeneous		96% Non-fibrous (other) 4% Mica	None Detected
929-8-3-Drywall 391100750-0024A		Various Non-Fibrous Heterogeneous	9% Cellulose 17% Glass	74% Non-fibrous (other)	None Detected
929-9-1 391100750-0025		Various Fibrous Heterogeneous	28% Cellulose 37% Min. Wood	7% Non-fibrous (other) 28% Perlite	None Detected
929-9-2 391100750-0026		Various Fibrous Heterogeneous	28% Cellulose 37% Min. Wood	7% Non-fibrous (other) 28% Perlite	None Detected

Initial report from 02/15/2011 09:11:45

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 Project: 15107089 - 929 Warren Barrett

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-9-3 391100750-0027		Various Fibrous Heterogeneous	28% Cellulose 37% Min. Wood	7% Non-fibrous (other) 28% Perlite	None Detected
929-10-1 391100750-0028		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-10-2 391100750-0029		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-10-3 391100750-0030		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-11-1 391100750-0031		Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-11-2 391100750-0032		Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-11-3 391100750-0033		Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

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 EMSL Order: 391100750

Fax: (314) 692-8810 Phone: (314) 692-8811
 Project: 15107089 - 929 Warren Barrett

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-12-1 391100750-0034		Cream Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-12-2 391100750-0035		Gray Non-Fibrous Heterogeneous		96% Non-fibrous (other)	4% Chrysotile
929-12-3 391100750-0036		Gray Non-Fibrous Heterogeneous		96% Non-fibrous (other)	4% Chrysotile
929-13-1 391100750-0037		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-13-2 391100750-0038		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-13-3 391100750-0039		Tan Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-14 391100750-0040					Not Submitted

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 Project: 15107089 - 929 Warren Barrett

EMSL Proj:
 Analysis Date: 2/10/2011

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
929-15-1 391100750-0041		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-15-2 391100750-0042		Various Non-Fibrous Heterogeneous		96% Non-fibrous (other)	4% Chrysotile
929-15-3 391100750-0043		Various Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
929-16 391100750-0044					Not Submitted

Initial report from 02/15/2011 09:11:45

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

APPENDIX D
PHOTOGRAPHS

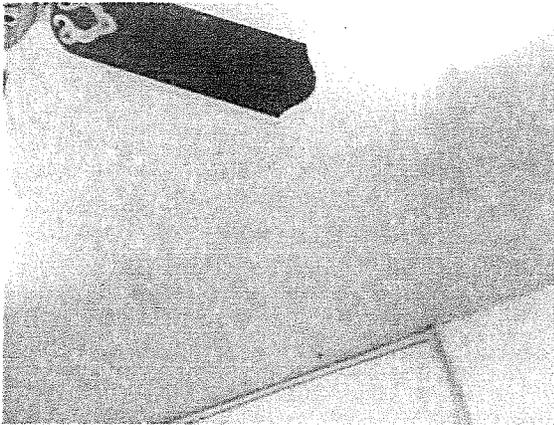


Photo #1 Drywall texture in The Display Center Office.

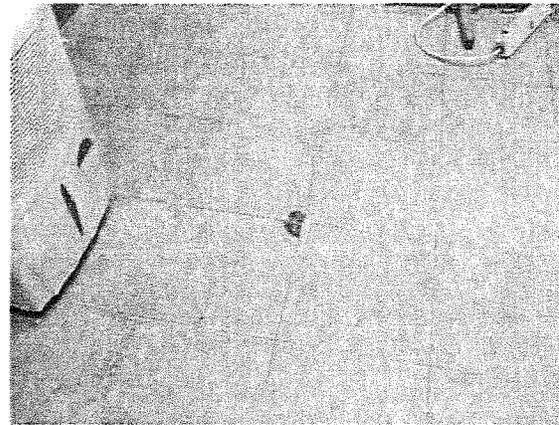


Photo #2 Floor tile and mastic in The Display Center offices.



Photo #3 The Display Center offices



Photo #4 View of Clearbridge Display assembly operations.

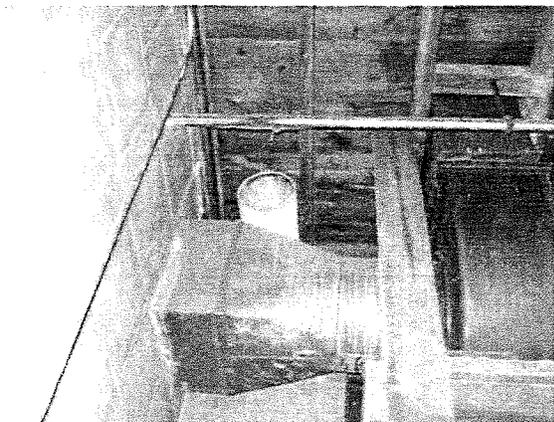


Photo #5 View of HA 14 - assumed cement pipe in warehouse



Photo #6 View of south warehouse building.

Asbestos Survey and Limited Lead Based Paint Survey
Terracon Project No. 15107089
The Display Center, 929 Warren Barrett, Hannibal, MO
Date Photos Taken: February 7, 2011

Terracon
Consulting Engineers & Scientists

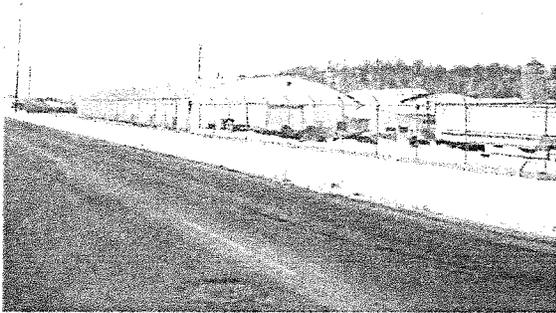


Photo #7 View of the Old Bus Barn (current Clearbridge Display Assembly)



Photo #8 View of former conveyor/gas dryer building with built up roof

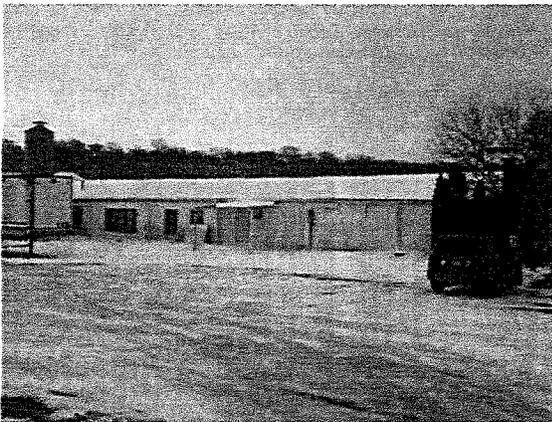


Photo #9 View of the Display Center manufacturing /assembly building

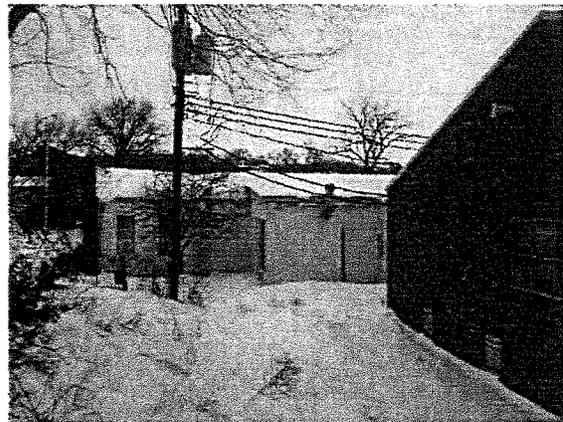


Photo #10 View of Print Room (at right) and The Display Center offices (background).

Photo #11

Photo #12

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

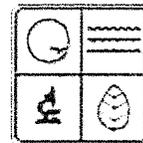
Bryan N. Gatlin

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



APPENDIX F

OPINION OF ABATEMENT COST

The regulated asbestos-containing materials in the buildings must be removed before demolition. It is recommended that an asbestos abatement specification (Project Design) be prepared by an AHERA-accredited and State of Missouri licensed Project Designer. Notification to the State of Missouri Department of Natural Resources, National Emissions Standards for Hazardous Air Pollutants (NESHAP) program coordinator will be required at least 10 days prior to demolition.

Based on our experience with similar projects in Missouri, the following are our opinions of abatement costs. Terracon encourages the City to contract for oversight and monitoring of the abatement contractor. These oversight costs typically amount to about \$500 per day.

The Display Center - 929 Warren Barrett

The abatement of approximately 1,000 linear feet of window glazing (Old Bus Barn -10 windows, Loading Dock – 2 windows, North Wall Pattern Shop and Vacuum Forming – 8 windows) 1,400 linear feet of window glazing (22 windows – South Warehouse), and ten linear feet of asbestos cement pipe (South Warehouse) may cost between \$14,000 and \$17,000. The 5,300 square feet of assumed asphaltic roofing can remain on the Conveyor/Gas Dryer Building C during demolition as long as the material is in good condition and is not made friable during removal or demolition.

These opinions of asbestos abatement costs are based on the following assumptions.

- The abatement contractor will have unlimited access to the building to perform the work.
- The contractor will have water and electrical power provided by the building owner.
- The contractor will mobilize personnel and equipment to the project site only once, and complete the abatement removal within normal 8-hour work shifts.

The City should consider stating these assumptions in a solicitation for competitive bids from appropriately licensed/accredited asbestos abatement contractors.