



September 19, 2012

Ms. Laura Waynick  
State of Tennessee  
Department of General Services  
Division of Real Estate Asset Management  
Tennessee Tower, Suite 2200  
312 Rosa L. Parks Avenue  
Nashville, Tennessee 37243

Re: Hazardous Materials Screening Report  
Old Supreme Court Building, 617 W. Cumberland Avenue, Knoxville, Tennessee  
TRM No. 521-00070

Dear Ms. Waynick:

Quantum Environmental & Engineering Services, LLC (QE<sup>2</sup>) conducted a hazardous materials screening to assess the potential presence of asbestos-containing materials (ACM), lead-based paint (LBP), and other hazardous materials at the Old Supreme Court complex located at 617 W. Cumberland Avenue in Knoxville, Tennessee. The facility is a combination of the 2-story Supreme Court wing and a 6-story office tower (plus basement and mechanical penthouse). The facility is approximately 52,000 square feet. The site is currently managed by the State of Tennessee, Department of General Services. QE<sup>2</sup> performed the field activities on February 23, 2012, at the request of the State of Tennessee, Division of Real Estate Asset Management (STREAM). The survey was performed and this report was prepared under contract with STREAM. An email report was provided to STREAM on February 27, 2012. Photographs are provided in Attachment A and laboratory reports are provided in Attachment B.

The principal objective of the hazardous materials screening was to gain information on the nature and general location of hazardous materials present in the facility in support of a study to evaluate final disposition. The information collected was used to determine potential hazardous materials abatement costs, and was not intended to be a comprehensive hazardous materials survey for purposes of renovation or demolition. A comprehensive hazardous materials survey and sampling event would be required to ensure the environmentally compliant handling and disposal of all hazardous or special wastes, in accordance with all State, and Federal regulations, if renovation or demolition is planned.

### **Findings - ACM**

The types, estimated quantities, and National Emission Standards for Hazardous Air Pollutants (NESHAP) categories confirmed or assumed during the screening include:

- ACM-labeled covering on two massive boilers (railroad car size) in the Boiler Room – assumed friable ACM,
- Approximately 160 linear feet of thermal system insulation (TSI) on large, 2-ft rectangular overhead steam/air ducting in the Court wing basement – assumed friable ACM,
- TSI on Mechanical Room, connector tunnel, and Boiler Room piping runs and fittings; the main Mechanical Room is approximately 1,700 square feet with 20-ft+ ceilings and several thousand linear feet of TSI runs plus fittings; the Boiler Room is approximately 1,000 square feet with 20-ft ceilings and several hundred linear feet of TSI plus fittings; a 25-ft long access tunnel ties the Mechanical Room to the Boiler Room and has several large ACM-labeled ducts and pipes – all assumed friable ACM,
- TSI plus fittings inside a pipe chase between restrooms (behind elevators) in the office tower; abatement work may require confined space entry precautions; much of the pipe chase insulation has been upgraded to non-ACM fiberglass, but approximately 350 linear feet plus various fittings of suspect ACM remains – assumed friable ACM,
- Approximately 5,000-6,000 linear feet of TSI plus 300-400 fittings (valves, elbows, etc.) on a perimeter 2-pipe boiler/chiller, heating/cooling loop; this 2-pipe loop runs the above the suspended ceiling (sometimes a double ceiling) around the perimeter of almost every floor; some ACM labeling was present – assumed friable ACM,
- 9-in x 9-in green vinyl floor tile (VFT) and associated mastic (mostly under carpet) – confirmed Category I non-friable ACM,
- 9-in x 9-in red VFT and associated mastic under carpet – confirmed Category I non-friable ACM,
- 9-in x 9-in off-white VFT and associated mastic under carpet and/or non-ACM 12-in x 12-in VFT – confirmed Category I non-friable ACM,
- Asphalt-based roofing materials (flashing, sealants, built-up layers) – assumed Category I non-friable ACM, and
- Fire doors in the Court wing – assumed friable ACM cores.

The VFT was confirmed by sampling, but TSI was assumed as ACM based on labeling, limited past data, and QE<sup>2</sup>'s professional opinion. Approximately 22,500 square feet of 9-in x 9-in VFT and associated mastic is present in the facility. This VFT is rarely visible without a detailed inspection, and is located in many offices and hallways under carpet, or under 12-in x 12-in VFT, or under multiple layers of 12-in x 12-in VFT and carpet.

In addition to the identification of all ACM in a facility, the regulatory standard requires that the facility owner or operator of a demolition or renovation activity remove all regulated ACM (RACM) before demolition or renovation commences. RACM is defined as:

- friable asbestos material such as TSI, and surfacing materials such as spray-applied or troweled on ceiling and wall coatings;
- Category I non-friable ACM that has become or is likely to become friable;
- Category I non-friable ACM that will be or has been subjected to sanding, grinding, cutting, or abrading; or
- Category II non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations regulated by Subpart M (National Emission Standard for Asbestos).

The Knox County Division of Air Quality Management (DAQM) must be notified and a permit obtained before any renovation, removal, or demolition activities in Knox County, that disturb more than 260 linear feet, 160 square feet, or 35 cubic feet of RACM. Notification is also required for removal, renovation, and/or demolition activities conducted at a facility if the amount of ACM disturbed in a calendar year during small scale work will exceed the threshold amounts (260/160/35). A completed Notification of Asbestos Demolition or Renovation Application must be postmarked or hand delivered to the DAQM at least ten (10) working days before asbestos removal work or demolition takes place.

A Tennessee licensed abatement contractor is required to perform activities involving RACM. The notification requirements and procedures for emission control are applicable based on the circumstances of the activity and the amount of asbestos present. Individuals engaged in activities involving asbestos or ACM must also comply with applicable regulations under the United States Department of Transportation (DOT) and Tennessee Department of Transportation (TDOT) for transportation of asbestos waste, the Occupational Safety and Health Administration (OSHA) and the Tennessee Occupational Safety and Health Administration (TOSHA) for occupational exposure, and the TDEC Division of Solid and Hazardous Waste Management (DSHWM) for disposal of ACM.

Non-friable ACM materials are not considered to be regulated ACM unless they have become friable, or are expected to become friable through being subjected to sanding, grinding, cutting, or abrading during demolition or renovation activities. These types of activities would not be expected during demolition at the subject site. The DAQM official may require removal of non-friable ACM after evaluation of planned demolition methods during the permitting process. If removal is required by DAQM before demolition, an accredited Tennessee licensed asbestos abatement contractor must perform the removal.

Suspect materials which were sampled and confirmed as **non-ACM** include plaster walls, plaster ceilings, drywall and joint compound, 12-in x 12-in VFT and associated mastics, carpet mastic, cove base and mastic, floor leveling compounds, exterior caulks, perimeter room air unit insulation, acoustical ceiling tiles, and duct insulation in the pipe chase. The laboratory reports are provided in Attachment B. The built-up roofing materials were not sampled, but based on the building's age the original materials likely contain some asphalt-based ACM layers. The EPA exempts asphalt-based roofing materials from abatement during demolitions as long as the

materials are not sawed or cut, so only minor costs are included for proper handling and disposal of these materials. The original roof is covered with a later rubber membrane (dated 1987) and gravel ballast.

### **Findings – Miscellaneous**

- Lead-based paint (LBP) – peeling yellow safety paint on exterior bollards exceeded the LBP standard of 1.0 mg/cm<sup>2</sup> when tested by x-ray fluorescence (XRF); exterior window and door frames tested at or slightly below the standard (0.7 to 1.0 mg/cm<sup>2</sup>). The Tennessee Department of Environment and Conservation (TDEC) does not require LBP abatement prior to demolition; however, rules of the Occupational Safety and Health Administration (OSHA) apply if sanding, scraping, water-blasting of LBP is performed.
- Polychlorinated biphenyls (PCBs) and mercury – approximately 380 fluorescent light fixtures with ballasts and approximately 1,000 4-ft, 250 8-ft, and 180 2-ft bulbs are located throughout the facility; the light fixtures were not opened and inspected and many of these ballasts may have been replaced after the PCB-ballast era; approximately 20 potential mercury-containing wall-mounted thermostats and other heating/cooling equipment potentially containing thermostats are located on each floor (room wall heaters, water fountains, appliances, etc.).
- Ozone-depleting substances (ODS) – at least one water fountain is present on each floor (about 8 total); one refrigerator was observed in the Court wing warehouse; ODS are potentially present in perimeter air units on each floor.
- Other hazardous materials – small containers of oils and lubricants, electrical equipment, cleaning supplies, and Freon are present; fire extinguishers are stored in the Court wing warehouse; an underground storage tank (UST) of unknown capacity with 2 feet of remaining diesel product (approximately 200-300 gallons) is located behind the building near the bay door; bird droppings are common on the top floor of the Office wing; mold growth from roof leaks and water damage is widespread.

### **Abatement Estimates**

The estimated cost for abatement and disposal of the items listed above is \$300,000 to \$325,000. Asbestos abatement activities must also be followed by air clearance sampling to provide proof proper abatement and cleaning. Air clearance testing and consulting would add \$25,000 to \$30,000 to the abatement, for a total of approximately \$350,000. A more detailed survey would be required prior to any abatement work, in order to confirm locations of all materials (especially under carpeting and layers of VFT). Exact locations and quantities of ACM must be declared to air pollution regulators before abatement and demolition may begin. A thorough sampling event would be conducted in general accordance with EPA regulations as applicable. Additional sampling would likely indicate that some materials assumed as ACM for this event may actually not be ACM, or that 9-in x 9-in VFT may not be as widespread as assumed during the limited

inspection. Limiting the amount of materials assumed as ACM could reduce the final abatement cost by thousands of dollars. The cost estimate includes removal and disposal of miscellaneous materials such as light bulbs, ballasts, thermostats, ODS, the UST and associated fluids, but does not include remediation of any soil contamination that might be encountered during UST removal.

If the building is renovated rather than demolished, abatement of the above items would only be required if the materials were to be disturbed during the renovation process. For example, the vast majority of 9-in x 9-in VFT could be left in place if only carpeting were replaced over the tile. Also, many light fixtures, bulbs, roofing materials, and fire doors might be retained. QE<sup>2</sup> does recommend that ACM piping insulation be abated (including the main Mechanical Room, connector tunnel, and Boiler Room) no matter the building's disposition, since these materials are deteriorated in many locations. QE<sup>2</sup> assumes that heating, ventilating, and air conditioning (HVAC) systems would be replaced; therefore, the boiler/chiller pipe loop systems would no longer be utilized. OSHA regulations and other EPA guidelines may also apply to renovation work involving LBP, animal waste, or mold-impacted materials.

If you have comments, questions, or need additional copies, please feel free to contact or me at 865-689-1395.

Sincerely,



Terence Davis, P.G.  
Senior Environmental Specialist

c: Phil Hyde, Department of General Services  
Don Johnson, Department of General Services  
QE<sup>2</sup> File SES.FA.526.073.01

Attachments

**ATTACHMENT A**

**Photographs**



**Photo 1: Exterior northeast corner**



**Photo 2: Exterior north side**



**Photo 3: Exterior tower west side**



**Photo 4: Exterior southwest corner**



**Photo 5: Exterior north side UST location**



**Photo 6: Roof**

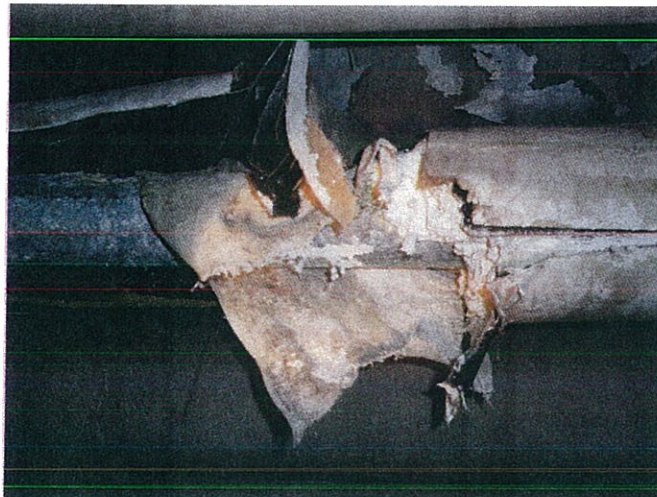




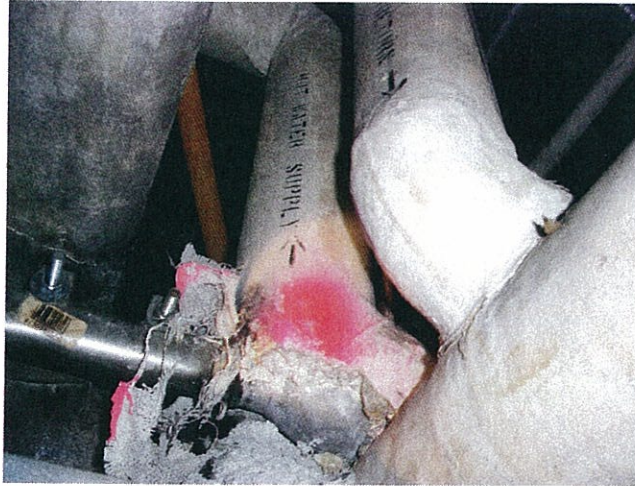
**Photo 7. Mechanical room TSI assumed ACM**



**Photo 8. Mechanical room TSI assumed ACM**



**Photo 9. Deteriorated TSI assumed ACM**



**Photo 10: Deteriorated TSI assumed ACM**



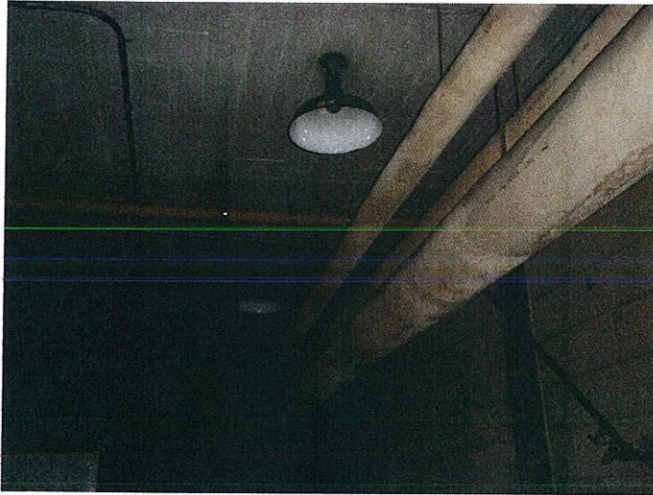
**Photo 11: Boiler wrap with asbestos warning**



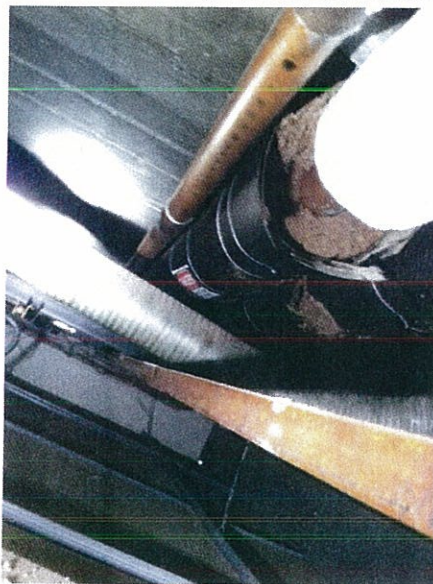
**Photo 12: Boiler with asbestos labeling**



**Photo 13: Hallway TSI assumed ACM**



**Photo 14: Hallway TSI assumed ACM**



**Photo 15: Perimeter hot-cool loop above suspended ceilings – note asbestos labels**



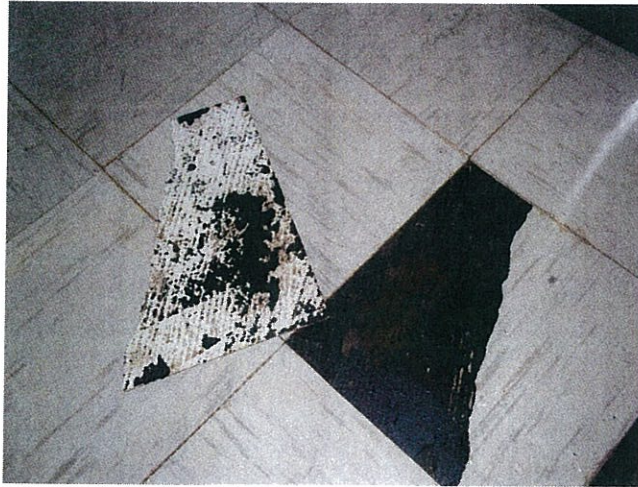
**Photo 16: Fire door potential ACM**



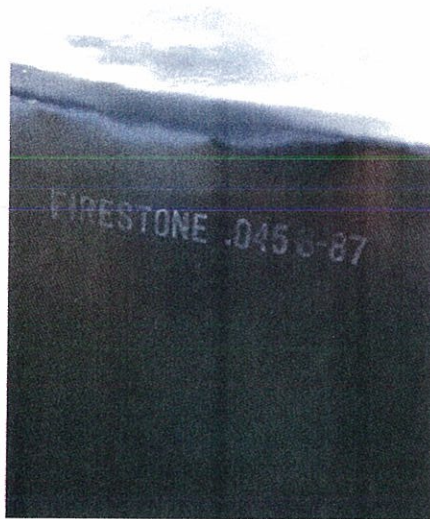
**Photo 17: VFT beneath carpet**



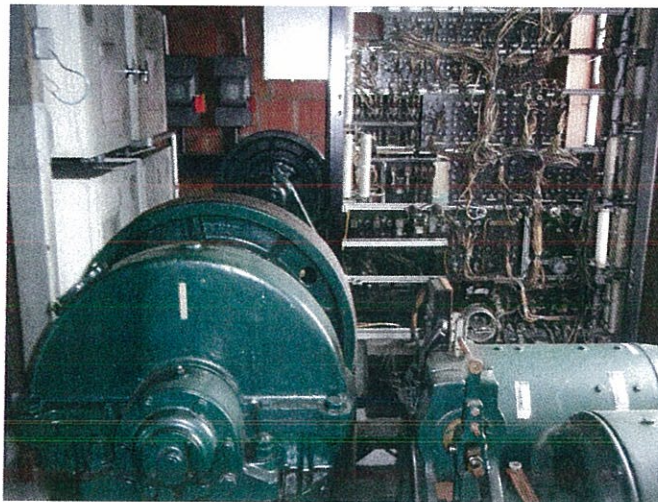
**Photo 18: 9-in x 9-in green VFT beneath carpet**



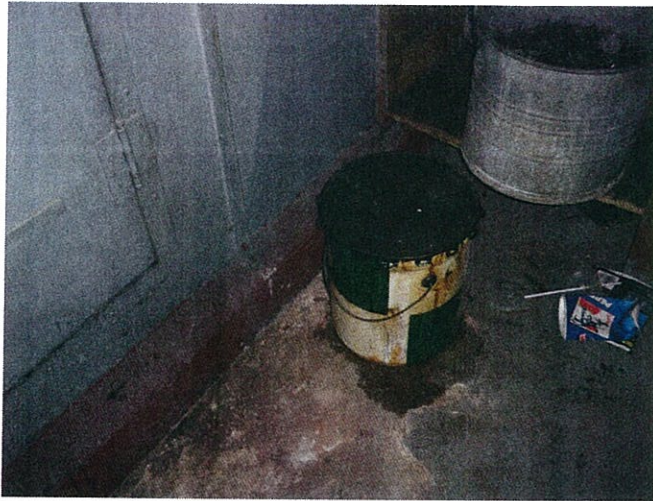
**Photo 19: 9 x 9 VFT beneath 12 x 12 VFT**



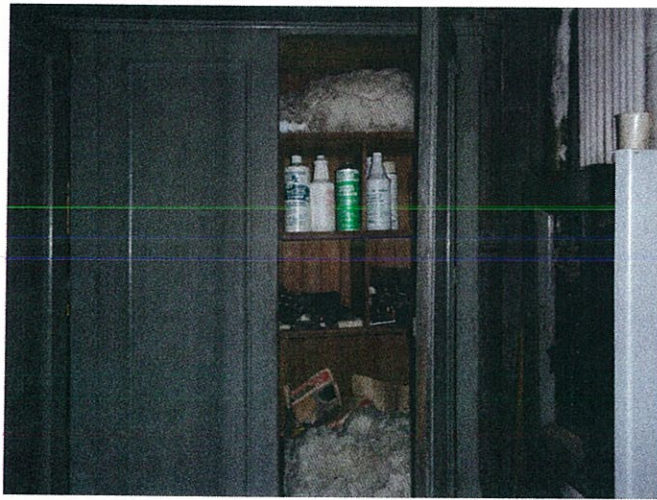
**Photo 20: Rubber roof membrane date of 1987**



**Photo 21: Elevator equipment in top level penthouse**



**Photo 22: Miscellaneous drummed compounds**



**Photo 23: Cleaning chemicals**



**Photo 24: Compressed cylinders – fire extinguishers**



**Photo 25: Fluorescent light bulbs, TSI**



**Photo 26: Bird droppings on upper floor of tower**



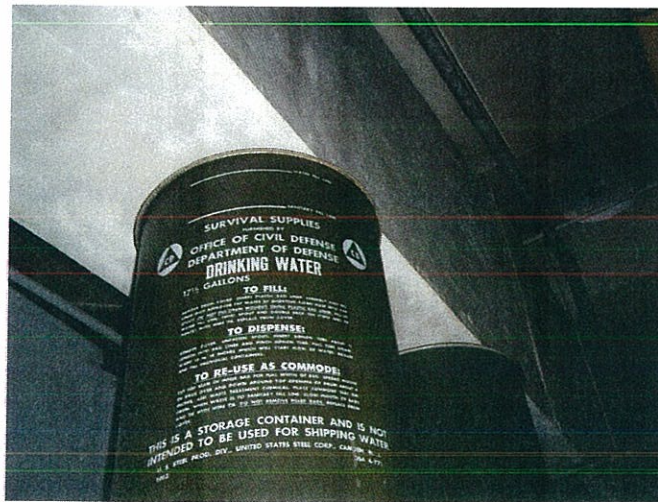
**Photo 27: Bird droppings on upper floor of tower**



**Photo 28: Dead bird on upper floor**



**Photo 29: Mold growth on carpeting in Court wing**



**Photo 30: Civil Defense containers stored in basement**



**ATTACHMENT B**

**Chain of Custody and  
Laboratory Report for Asbestos Samples**

# SanAir Technologies Laboratory

## Analysis Report

prepared for

**Quantum Environmental &  
Engineering Services, LLC**

**Report Date: 2/24/2012**  
**Project Name: Old Supreme Court  
Building**  
**Project #: FA.526.073.01**  
**SanAir ID#: 12003718**



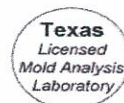
NVLAP LAB CODE 200870-0



LAB # 62052



Certification # 652931



License # LAB0166



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# SanAir Technologies Laboratory, Inc.

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Web: <http://www.sanair.com> E-mail: [iaq@sanair.com](mailto:iaq@sanair.com)

Quantum Environmental & Engineering Services, LLC  
126 Dante Road  
Knoxville, TN 37918

February 24, 2012

SanAir ID # 12003718  
Project Name: Old Supreme Court Building  
Project Number: FA.526.073.01

Dear TLD/JRL,

We at SanAir would like to thank you for the work you recently submitted. The 16 sample(s) were received on Friday, February 24, 2012 via FedEx. The final report(s) is enclosed for the following sample(s): KSC-1, KSC-2, KSC-3, KSC-4, KSC-5, KSC-6, KSC-7, KSC-8, KSC-9, KSC-10, KSC-11, KSC-12, KSC-13, KSC-14, KSC-15, KSC-16.

These results only pertain to this job and should not be used in the interpretation of any other job. This report is only complete in its entirety. Refer to the listing below of the pages included in a complete final report.

Sincerely,

Sandra Sobrino  
Asbestos & Materials Laboratory Manager  
SanAir Technologies Laboratory

Final Report Includes:

- Cover Letter
- Analysis Pages
- Disclaimers and Additional Information

sample conditions:

16 sample(s) in Good condition



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Web: <http://www.sanair.com> E-mail: [iaq@sanair.com](mailto:iaq@sanair.com)

SanAir ID Number

**12003718**

FINAL REPORT

**Name:** Quantum Environmental & Engineering Services,  
**Address:** LLC  
126 Dante Road  
Knoxville, TN 37918

**Project Number:** FA.526.073.01  
**P.O. Number:**  
**Project Name:** Old Supreme Court Building

**Collected Date:** 2/23/2012  
**Received Date:** 2/24/2012 10:10:00 AM  
**Report Date:** 2/24/2012 12:53:53 PM  
**Analyst:** Tallert, Jonathan G.

## Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-1 / 12003718-001 12x12 VFT And 9x9 VFT Under, With Mastics, Floor Tile	White Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-1 / 12003718-001 12x12 VFT And 9x9 VFT Under, With Mastics, Mastic	Black Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-1 / 12003718-001 12x12 VFT And 9x9 VFT Under, With Mastics, Floor Tile	Beige Non-Fibrous Homogeneous		93%	Other	7% Chrysotile
KSC-1 / 12003718-001 12x12 VFT And 9x9 VFT Under, With Mastics, Mastic	Black Non-Fibrous Homogeneous		95%	Other	5% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-2 / 12003718-002 9x9 VFT And Mastic, Carpet Mastic	Yellow Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-2 / 12003718-002 9x9 VFT And Mastic, Floor Tile	White Non-Fibrous Homogeneous		93%	Other	7% Chrysotile
KSC-2 / 12003718-002 9x9 VFT And Mastic, Mastic	Black Non-Fibrous Homogeneous		95%	Other	5% Chrysotile

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-3 / 12003718-003 9x9 VFT And Mastic, Mastic	Black Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-3 / 12003718-003 9x9 VFT And Mastic, Floor Tile	Green Non-Fibrous Homogeneous		93%	Other	7% Chrysotile
KSC-3 / 12003718-003 9x9 VFT And Mastic, Mastic	Black Non-Fibrous Homogeneous		95%	Other	5% Chrysotile

### Certification

Signature:   
Date: 2/24/2012

Reviewed:   
Date: 2/24/2012



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**Report Date:** 2/24/2012 12:53:53 PM  
**Analyst:** Tallert, Jonathan G.

### Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
KSC-4 / 12003718-004 Upper Ceiling Drywall Substrate	White Non-Fibrous Homogeneous	10% Cellulose	90% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
KSC-5 / 12003718-005 Upper Ceiling 1x1 Ceiling-Mount Tiles	White Fibrous Homogeneous	95% Cellulose	5% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
KSC-6 / 12003718-006 Upper Ceiling Plaster - Skim & Base, Skim Coat	White Non-Fibrous Homogeneous		100% Other	None Detected
KSC-6 / 12003718-006 Upper Ceiling Plaster - Skim & Base, Plaster	Grey Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
KSC-7 / 12003718-007 Drywall & Joint Compound Walls, Drywall	White Non-Fibrous Homogeneous	10% Cellulose	90% Other	None Detected
KSC-7 / 12003718-007 Drywall & Joint Compound Walls, Joint Compound	White Non-Fibrous Homogeneous		100% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
KSC-8 / 12003718-008 "Hair" Pipe Insulation On Perimeter Heat/Air Units	Brown Fibrous Homogeneous	100% Hair	< 1% Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	Components		Asbestos Fibers
		% Fibrous	% Non-Fibrous	
KSC-9 / 12003718-009 Tar Paper Wrap & Pipe Insulation - Pipe Chase, Tar Paper	Black Fibrous Homogeneous	50% Cellulose	50% Other	None Detected
KSC-9 / 12003718-009 Tar Paper Wrap & Pipe Insulation - Pipe Chase, Insulation	Brown Fibrous Homogeneous	60% Min. Wool	40% Other	None Detected

#### Certification

Signature:   
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**Analyst:** Tallert, Jonathan G.

### Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-10 / 12003718-010 Cove Base, Mastic, & Leveling Compound, Cove Base	Grey Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-10 / 12003718-010 Cove Base, Mastic, & Leveling Compound, Mastic	Yellow Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-10 / 12003718-010 Cove Base, Mastic, & Leveling Compound, Leveling Compound	White Non-Fibrous Homogeneous		100%	Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-11 / 12003718-011 Ceiling Plaster - Base & Skim, Base Plaster	Grey Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-11 / 12003718-011 Ceiling Plaster - Base & Skim, Skim Coat	White Non-Fibrous Homogeneous		100%	Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-12 / 12003718-012 Wall Plaster - Skim & Base, Skim Coat	White Non-Fibrous Homogeneous		100%	Other	None Detected
KSC-12 / 12003718-012 Wall Plaster - Skim & Base, Base Plaster	Grey Non-Fibrous Homogeneous		100%	Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-13 / 12003718-013 Leveling Compound Under Courtroom Carpet	Grey Non-Fibrous Homogeneous		100%	Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-14 / 12003718-014 Leveling Compound Under Carpet Threshold	Grey Non-Fibrous Homogeneous		100%	Other	None Detected

#### Certification

Signature:   
Date: 2/24/2012

Reviewed:   
Date: 2/24/2012



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SanAir ID Number

**12003718**

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**Analyst:** Tallert, Jonathan G.

## Asbestos Bulk PLM EPA 600/R-93/116

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-15 / 12003718-015 Exterior Marble Panel Caulking	White Non-Fibrous Homogeneous		100%	Other	None Detected

SanAir ID / Description	Stereoscopic Appearance	% Fibrous	Components		Asbestos Fibers
			% Non-Fibrous		
KSC-16 / 12003718-016 Exterior Window Caulking	White Non-Fibrous Homogeneous		100%	Other	None Detected

### Certification

Signature:

Date: 2/24/2012

Reviewed:

Date: 2/24/2012

### **Disclaimer**

The final report cannot be reproduced, except in full, without written authorization from SanAir. Fibers smaller than 5 microns cannot be seen with this method due to scope limitations. The accuracy of the results is dependent upon the client's sampling procedure and information provided to the laboratory by the client. SanAir assumes no responsibility for the sampling procedure and will provide evaluation reports based solely on the sample and information provided by the client. This report may not be used by the client to claim product endorsement by NVLAP, AIHA or any other agency of the U.S. government; *and may not be certified by every local, state and federal regulatory agencies.*



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 www.sanair.com

**Asbestos  
Chain of Custody**

SanAir ID Number

12003718

Company: Quantum Environmental & Engineering, LLC	Project #: FA.526.073.01	Phone #: 865-689-1395
Address: 126 Dante Road	Project Name: Old Supreme Court Building	Phone #: 865-607-0210
City, St., Zip: Knoxville, TN 37918	Date Collected: 2/23/2012	Fax #: 865-689-6844
Samples Collected By: TLD/JRL	P.O. Number:	Email: tdavis@qe2llc.com

**Asbestos Analysis Types**

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116 <input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400 <input type="checkbox"/>	ABSE	PLM EPA 600/R-93/116 (Qual.) <input type="checkbox"/>
	Positive Stop <input type="checkbox"/>	ABA-2	OSHA w/ TWA* <input type="checkbox"/>	ABSP	PLM CARB 435 (LOD <1%) <input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count <input type="checkbox"/>	ABTEM	TEM AHERA <input type="checkbox"/>	ABSP1	PLM CARB 435 (LOD 0.25%) <input type="checkbox"/>
ABBIK	PLM EPA 1000 Point Count <input type="checkbox"/>	ABATN	TEM NIOSH 7402 <input type="checkbox"/>	ABSP2	PLM CARB 435 (LOD 0.1%) <input type="checkbox"/>
ABBEN	PLM EPA NOB <input type="checkbox"/>	ABT2	TEM Level II <input type="checkbox"/>		
ABBCH	TEM Chatfield <input type="checkbox"/>				
ABBTM	TEM EPA NOB <input type="checkbox"/>				
ABBNY	TEM NY ELAP 198.4 <input type="checkbox"/>	Water		Dust	
OTHER/ Matrix :	<input type="checkbox"/>	ABHE	EPA 100.2 <input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480 <input type="checkbox"/>
				ABDMV	TEM Microvac ASTM D-5755 <input type="checkbox"/>

Turn Around	<input type="checkbox"/> 3 HR (4 HR TEM)	<input checked="" type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
Times	2 Days <input type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
KSC-1	12 x 12 white w/gray VFT and 9 x 9 beige VFT under, with mastics		bulk		
KSC-2	9 x 9 white w/black marbling VFT and mastic		bulk		
KSC-3	9 x 9 green VFT and mastic		bulk		
KSC-4	upper ceiling drywall substrate		bulk		
KSC-5	upper ceiling 1 x 1 ceiling-mount tiles		bulk		
KSC-6	upper ceiling plaster - skim & base		bulk		
KSC-7	drywall & joint compound walls		bulk		
KSC-8	"hair" pipe insulation on perimeter heat/air units		bulk		
KSC-9	tar paper wrap & brown pipe insulation - pipe chase		bulk		
KSC-10	cove base, mastic, & leveling compound		bulk		
KSC-11	ceiling plaster - base & skim		bulk		
KSC-12	wall plaster - skim & base		bulk		

Special Instructions: 10-HR TAT - analyze all layers

Relinquished by	Date (AD)	Time	Received by	Date	Time
<i>[Signature]</i>	2/23/12	10:20	<i>[Signature]</i>	FEB 24 2012	10:10H

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning. Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time. Work with standard turn around time sent Priority Overnight and Billed To Recipient will be charged a \$10 shipping fee.

SanAir Technologies Laboratory, Inc.  
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Asbestos  
 Chain of Custody

SanAir ID Number  
 12003718

Company: Quantum Environmental & Engineering, LLC	Project #: FA.526.073.01	Phone #: 865-689-1395
Address: 126 Dante Road	Project Name: Old Supreme Court Building	Phone #: 865-607-0210
City, St., Zip: Knoxville, TN 37918	Date Collected: 2/23/2012	Fax #: 865-689-6844
Samples Collected By: TLD/JRL	P.O. Number:	Email: tdavis@qe2llc.com

Asbestos Analysis Types

Bulk		Air		Soil/Vermiculite	
ABB	PLM EPA 600/R-93/116 <input checked="" type="checkbox"/>	ABA	PCM NIOSH 7400 <input type="checkbox"/>	ABSE	PLM EPA 600/R-93/116 (Qual.) <input type="checkbox"/>
	Positive Stop <input type="checkbox"/>	ABA-2	OSHA w/ TWA* <input type="checkbox"/>	ABSP	PLM CARB 435 (LOD <1%) <input type="checkbox"/>
ABEPA	PLM EPA 400 Point Count <input type="checkbox"/>	ABTEM	TEM AHERA <input type="checkbox"/>	ABSP1	PLM CARB 435 (LOD 0.25%) <input type="checkbox"/>
ABB1K	PLM EPA 1000 Point Count <input type="checkbox"/>	ABATN	TEM NIOSH 7402 <input type="checkbox"/>	ABSP2	PLM CARB 435 (LOD 0.1%) <input type="checkbox"/>
ABBEN	PLM EPA NOB <input type="checkbox"/>	ABT2	TEM Level II <input type="checkbox"/>		
ABBCH	TEM Charfield <input type="checkbox"/>				
ABBTM	TEM EPA NOB <input type="checkbox"/>				
		Water		Dust	
ABBNY	TEM NY ELAP 198.4 <input type="checkbox"/>	ABHE	EPA 100.2 <input type="checkbox"/>	ABWA	TEM Wipe ASTM D-6480 <input type="checkbox"/>
OTHER/ Matrix :	<input type="checkbox"/>			ABDMV	TEM Microvac ASTM D-5755 <input type="checkbox"/>

Turn Around Times	<input type="checkbox"/> 3 HR (4 HR TEM)	<input checked="" type="checkbox"/> 6 HR (8HR TEM)	<input type="checkbox"/> 12 HR	<input type="checkbox"/> 24 HR
	2 Days <input type="checkbox"/>	3 Days <input type="checkbox"/>	4 Days <input type="checkbox"/>	5 Days <input type="checkbox"/>

Sample #	Sample Identification/Location	Volume or Area	Sample Type	Flow Rate*	Time* Start - Stop
KSC-13	leveling compound under courtroom carpet		bulk		
KSC-14	leveling compound under carpet threshold		bulk		
KSC-15	exterior marble panel caulking		bulk		
KSC-16	exterior window caulking		bulk		

Special Instructions: 12-HR TAT - analyze all labors

Relinquished by	Date (h)	Time	Received by	Date	Time
TLD/JRL	2/23/12	11:00	NAP	FEB 24 2012	10:10A

Unless scheduled, the turn around time for all samples received after 5 pm Friday will begin at 8 am Monday morning.  
 Weekend or Holiday work must be scheduled ahead of time and is charged for rush turn around time.  
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