



**PRE-RENOVATION  
INVESTIGATIVE SURVEY FOR  
ASBESTOS-CONTAINING MATERIALS  
18-20 TRINITY STREET  
HARTFORD, CONNECTICUT**

**Project No. 2B-05-31  
DPW No. 19360**

*Prepared for*  
State of Connecticut  
Department of Public Works  
Hartford, Connecticut

*Prepared by*  
TRC Environmental Corporation  
Windsor, Connecticut

  
Donald LePage  
Project Manager

TRC Project No. 43500-2840-00001  
November 16, 2005

**TRC Environmental Corporation**  
5 Waterside Crossing  
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## **EXECUTIVE SUMMARY**

On November 2, 2005 TRC Environmental Corporation (TRC) of Windsor, Connecticut conducted an inspection for suspect asbestos-containing materials (ACM) at 18-20 Trinity Street in Hartford, Connecticut. The inspection was initiated prior to planned renovation activities in accordance with USEPA Asbestos National Emissions Standard for Hazardous Air Pollutants (NESHAPS) requirements.

The scope of the inspection was limited to the first and fourth floor north and south wing mechanical rooms, and the third floor roof penthouse mechanical room at the facility. A Connecticut licensed asbestos inspector from TRC conducted the inspection in accordance with USEPA AHERA protocols and ASTM Standard E2356-04. Bulk samples of suspect materials were collected and analyzed via polarized light microscopy (PLM) methods at CTDPH/NVLAP accredited laboratories. ACM was identified as woven brown pipe wrap on the exterior of HVAC Unit FA8 in the 4<sup>th</sup> floor south mechanical room and as woven brown pipe wrap on the interior of HVAC Unit FA10 in the 3<sup>rd</sup> floor roof penthouse. ACM as woven brown pipe wrap is also assumed to be on the interior of HVAC Units FA6 and FA7 in the 4<sup>th</sup> floor north mechanical room. ACM to be impacted by renovation activities must be removed prior to disturbance in accordance with OSHA, USEPA, CTDPH, and CTDEP standards for asbestos abatement/disposal. Detailed results of the asbestos survey can be found in Tables 1-3 and Appendices A through D.

## PROJECT OUTLINE

Project Address: 18-20 Trinity Street  
Hartford, CT

DAS Contract No. 03PSX0346E

DPW Project Manager Michael Sanders

DPW Project No.: 2B-05

DPW Building No: 19360

TRC Project No.: 43500-2840-00001

Asbestos Inspector: Jacob Smith (LIC #000621)

Date of Inspection: November 2, 2005

Asbestos Identified: Yes

### Additional Notes:

The site investigation was limited to the collection and analysis of suspect asbestos-containing pipe wrapping materials from within the 1<sup>st</sup> and 4<sup>th</sup> floor north and south wing mechanical rooms and from the 3<sup>rd</sup> floor roof penthouse mechanical room of the building.

# TABLES

**TABLE 1**  
**BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS**  
**18-20 TRINITY STREET**  
**HARTFORD, CONNECTICUT**

Sample No.	Sample Location	Homogeneous Material	% and Type Asbestos
01	4 <sup>th</sup> floor-south wing mechanical room HVAC Unit FA8	Brown woven pipe wrap located on the 2 exterior horizontal pipes on the side of the unit	40% Chrysotile
02	4 <sup>th</sup> floor-south wing mechanical room HVAC Unit FA8	Brown woven pipe wrap located on the 2 exterior horizontal pipes on the side of the unit	NA/PS
03	4 <sup>th</sup> floor-south wing mechanical room HVAC Unit FA8	Brown woven pipe wrap located on the 2 exterior horizontal pipes on the side of the unit	NA/PS
04	4 <sup>th</sup> floor-north wing mechanical room HVAC Unit FA7	Brown corrugated pipe wrap located on the 2 short sections of pipe extruding from the front of the unit	ND<1%
05	4 <sup>th</sup> floor-north wing mechanical room HVAC Unit FA7	Brown corrugated pipe wrap located on the 2 short sections of pipe extruding from the front of the unit	ND<1%
06	4 <sup>th</sup> floor-north wing mechanical room HVAC Unit FA6	Brown corrugated pipe wrap located on the 2 short sections of pipe extruding from the front of the unit	ND<1%
07	3 <sup>rd</sup> floor-roof penthouse HVAC Unit FA10	Brown woven pipe wrap located on the 2 interior sections of pipe that are inside the unit	80% Chrysotile
08	3 <sup>rd</sup> floor-roof penthouse HVAC Unit FA10	Brown woven pipe wrap located on the 2 interior sections of pipe that are inside the unit	NA/PS
09	3 <sup>rd</sup> floor-roof penthouse HVAC Unit FA10	Brown woven pipe wrap located on the 2 interior sections of pipe that are inside the unit	NA/PS

NA/PVA Not analyzed/positive via inseparable association with a confirmed positive ACM

NA/PS Not analyzed/positive stop, homogeneous to sample proven to contain asbestos

ND<1% Non-detected, less than 1%

NAD No asbestos detected

+ Although found to be negative by analysis, material is homogeneous to a determined ACM and therefore must be considered positive

1 NOB material; result confirmed by TEM analyses

\* Quantified by PLM Point Counting techniques

**TABLE 2  
IDENTIFIED ASBESTOS CONTAINING MATERIALS (≥1%)  
18-20 TRINITY STREET  
HARTFORD, CONNECTICUT**

<b>Material</b>	<b>Sampled- Assumed (mo/yr)</b>	<b>General Location</b>	<b>NESHAP Category</b>	<b>AHERA Category</b>	<b>Estimated Quantity</b>
Brown woven pipe wrap	Sampled 11/05	4 <sup>th</sup> floor south wing mechanical room (HVAC Unit FA8)	Category I Non-friable	Thermal System Insulation	12 LF
Brown woven pipe wrap	Sampled 11/05	3 <sup>rd</sup> floor roof penthouse (HVAC Unit FA10)	Category I Non-friable	Thermal System Insulation	12 LF
Brown woven pipe wrap	Assumed 11/05	4 <sup>th</sup> floor north wing mechanical room (HVAC Units FA6 and FA7)	Category I Non-friable	Thermal System Insulation	12 LF

*\* Roof tars have been completely exempted from OSHA Asbestos regulations and, as a Category I Non-friable material, do not need to be removed from a structure prior to renovation/demolition under EPA Asbestos NESHAP regulations and, so long as the materials are exterior to a structure and will remain Category I Non-friable materials during renovation/demolition, are not covered under the CTDPH Asbestos Abatement standards. In addition, as Category I Non-friable materials, the roof tars do not need to be disposed of as asbestos waste under the EPA Asbestos NESHAP regulations; however, the CTDEP special waste regulations would not allow the material to be disposed of as general construction waste within the State of Connecticut. Disposal of the roof tars as general construction waste (so long as the materials are not rendered into a state which would define them as regulated asbestos-containing materials (RACM), i.e., friable) is, however, allowed in other states such as Massachusetts.*

AHERA Categories = thermal system insulation (TSI), surfacing material or miscellaneous  
 NESHAP Categories = friable, category I non-friable or category II non-friable  
 Friable = crumbled, pulverized or reduced to powder by hand pressure when dry  
 Category I Non-friable = packings, gaskets, resilient floor covering and asphalt roofing  
 Category II Non-friable = all non-friable that is not Category I

**TABLE 3  
CONFIRMED NON-ASBESTOS CONTAINING MATERIALS  
18-20 TRINITY STREET  
HARTFORD, CONNECTICUT**

<b>Material</b>	<b>General Location</b>
Brown corrugated pipe wrap	4 <sup>th</sup> floor north mechanical room HVAC Units FA6 and FA7

\* There was no visible suspect ACM material in the 1<sup>st</sup> floor north and south mechanical rooms



**APPENDIX A**

**SITE SKETCH**

SHEET NO. 1 OF 1

PROJECT NO. 43500-2840-00001

DATE 11/2/05

BY J. Smith

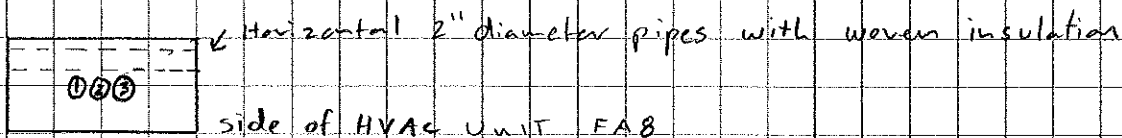
CHK'D \_\_\_\_\_



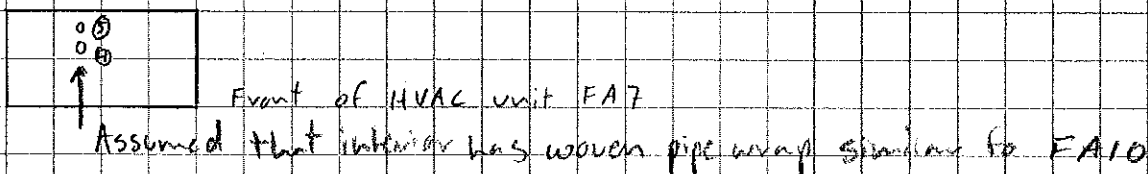
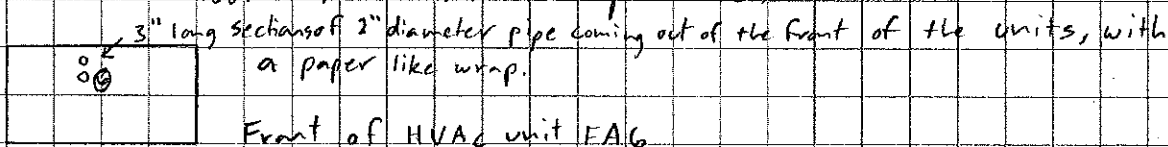
Customer-Focused Solutions

SUBJECT 18-20 Trinity St.

1st Step - 4th Floor South Mech Rm (Samples 1-3)



2nd step - 4th Floor North Mech Rm (Samples 4-6)



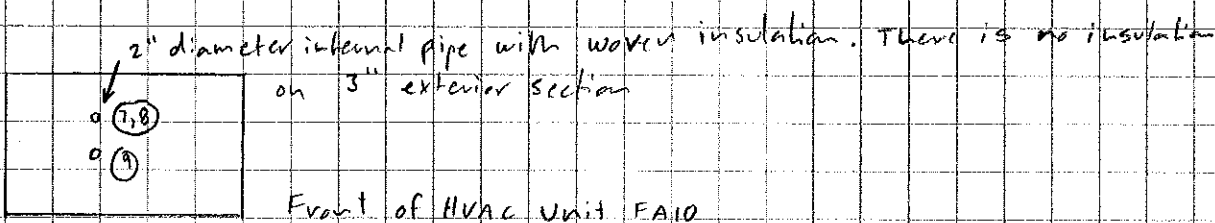
3rd step - 1st Floor South Mech Room

\* no visible suspect material on units FA4/FA5

4th step - 1st Floor North Mech Room

\* no visible suspect material on units 2/3

5th step - 3rd Floor Roof Penthouse (Samples 7-9)



## **APPENDIX B**

# **LABORATORY AND INSPECTOR ACCREDITATIONS**

*State of Connecticut, Department of Public Health*  
*Approved Environmental Laboratory*

THIS IS TO CERTIFY THAT THE LABORATORY DESCRIBED BELOW HAS BEEN APPROVED BY THE STATE DEPARTMENT OF PUBLIC HEALTH PURSUANT TO APPLICABLE PROVISIONS OF THE PUBLIC HEALTH CODE AND GENERAL STATUTES OF CONNECTICUT, FOR MAKING THE EXAMINATIONS, DETERMINATIONS OR TESTS SPECIFIED BELOW WHICH HAVE BEEN AUTHORIZED IN WRITING BY THAT DEPARTMENT.

**TRC ENVIRONMENTAL CORPORATION**

LOCATED AT 5 Waterside Crossing IN Windsor, CT 06095

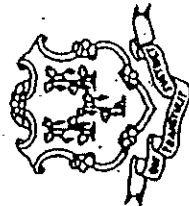
AND REGISTERED IN THE NAME OF Henry Laliberte

THIS CERTIFICATE IS ISSUED IN THE NAME OF Henry Laliberte WHO HAS BEEN DESIGNATED BY THE REGISTERED OWNER/AUTHORIZED AGENT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

ASBESTOS  
AIR-FIBER COUNTING  
BULK IDENTIFICATION

**SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED**

THIS CERTIFICATE EXPIRES December 31, 2005 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH DATED AT HARTFORD, CONNECTICUT, THIS 30<sup>th</sup> DAY OF DECEMBER, 2003

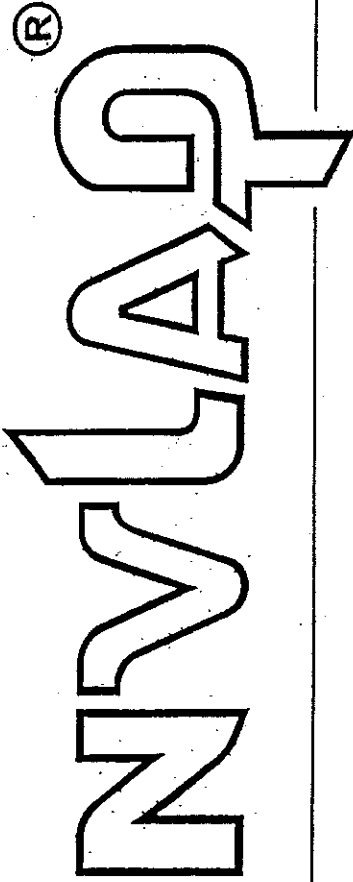


PH- 0426

*Ellen J. Blaschinski*

DIRECTOR, DIVISION OF ENVIRONMENTAL HEALTH

United States Department of Commerce  
National Institute of Standards and Technology



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# Certificate of Accreditation to ISO/IEC 17025:1999

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NVLAP LAB CODE: 101424-0

**TRC Environmental Corporation**  
Windsor, CT

is recognized by the National Voluntary Laboratory Accreditation Program for conformance with criteria set forth in  
NIST Handbook 150:2001 and all requirements of ISO/IEC Guide 17025:1999.  
Accreditation is granted for specific services, listed on the Scope of Accreditation, for:

**BULK ASBESTOS FIBER ANALYSIS**

2005-07-01 through 2006-06-30

Effective dates



A handwritten signature in black ink, appearing to read "Stephen P. W. Wood".

For the National Institute of Standards and Technology



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## Health Care or Environmental Health Professional's License Status

This site is part of **CT-cllic.com**, the **Connecticut Licensing Info Center**, that links to all YOUR State licensing and registration needs.

Note: Requests for copies of documents related to past disciplinary action for professions other than physicians may be emailed as such documents are not currently available via this web site. Please include your name and telephone number on any request.

**License Type:** Asbestos Consultant - Inspector  
**License Number:** 000621  
**Name:** SMITH, JACOB C  
**Expiration Date:** 1/31/2006  
**Granted Date:** 6/1/2005  
**License Name:** Jacob C. Smith  
**License Status:** Current  
**Disciplinary Action:** None

### Questions ? ?

E-mail [webmaster.dph@po.state.ct.us](mailto:webmaster.dph@po.state.ct.us) or call (860) 509-7603  
[Return to DPH Licensure/Renewal Page](#)

**For Business Registry Questions?** Contact **Smart STATE** or call 1-800-392-2122.

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# CERTIFICATE OF ACHIEVEMENT

*This certifies that*

**Jacob Smith**

*has successfully completed the*

**24 Hour Asbestos Site Inspector Training  
Asbestos Accreditation Under TSCA Title II  
40 CFR Part 763**

*conducted by*

*ATC Associates Inc.  
73 William Franks Drive  
West Springfield, MA 01089  
(413) 781-0070*

*Edward Kobylzig*

Principal Instructor

February 9-11, 2005

Date of Course

February 11, 2006

Expiration Date

*Gregory J. Morach*

Regional Manager

SI-1161

Certificate Number

February 11, 2005

Examination Date

## **APPENDIX C**

# **ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORMS**





Customer-Focused Solutions  
 5 WATERSIDE CROSSING  
 WINDSOR, CONNECTICUT 06095  
 TELEPHONE (860) 298-9692  
 FAX (860) 298-6399

## ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 31453

PROJECT NUMBER		PROJECT NAME		PARAMETERS				TURNAROUND TIME							
								PLM:	TEM:	24hr	48hr	3day	5day		
43500-2840-00001		18-20 Trinity St - PPW						<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
INSPECTOR: (SIGNATURE)		(PRINTED)						MATERIAL							
		Jacob Smith													
FIELD SAMPLE NUMBER	DATE	TIME	TYPE		SAMPLE LOCATION	PLM NY NOB 198.1 (POSITIVE STOP)	PLM NY NOB 198.1 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (R > 1% & < 10%)	TEM NY NOB 198.4 (R PLM SERIES NEG)					
			COMP	GRAB							24hr	48hr	3day	5day	
01	11/2/05	PM	X	X	4th Floor - South Mech Rm	X					Woven Pipe Insulation - Unit FA8				
02			X	X	I	X					I				
03			X	X	I	X									
04			X	X	4th Floor - North Mech Rm	X					Corrugated Pipe Wrap - Unit FA7				
05			X	X	I	X					"				
06			X	X	I	X					Corrugated Pipe Wrap - Unit FA6				
07			X	X	3rd Floor - Roof Parthouse	X					Woven pipe insulation - Unit FA10				
08			X	X	I	X									
09			X	X	I	X					I				
RELINQUISHED BY: (SIGNATURE)		RECEIVED BY: (SIGNATURE)		DATE:		RECEIVED BY: (SIGNATURE)		DATE:		RECEIVED BY: (SIGNATURE)		DATE:		RECEIVED BY: (SIGNATURE)	
				11/2/05				0900				11/2/05			
(PRINTED)		(PRINTED)		Time:		(PRINTED)		Time:		(PRINTED)		Time:		(PRINTED)	
Jacob Smith		Maureen Grissom		1600		0900 11/02/05									
REMARKS:															

## **APPENDIX D**

# **PLM LABORATORY ANALYSIS DATA**

**TRC ENVIRONMENTAL CORPORATION**  
Environmental Chemistry Laboratory  
21 Griffin Road North  
Windsor, CT 06095  
(860) 298-6308

**BULK ASBESTOS ANALYSIS REPORT**

CLIENT: CT Department of Public Works

Site: 18-20 Trinity Street  
Lab Log #: 31453  
Project #: 43500-2840-00001  
Date Received: 11/03/05  
Date Analyzed: 11/03/05

**RESULTS**

Sample No.	Color	Homogeneous	Multi-Layered	Layer No.	Other Matrix Mat'ls	Asbestos %	Asbestos Type
01	Brown	Yes	No	--	40% cellulose	40%	Chrysotile
02	--	--	--	--	--	NA/PS	--
03	--	--	--	--	--	NA/PS	--
04	Brown	Yes	No	--	90% cellulose	ND<1%	None
05	Black/Brown	Yes	No	--	90% cellulose	ND<1%	None
06	Brown	Yes	No	--	90% cellulose	ND<1%	None
07	Black/White	Yes	No	--	--	80%	Chrysotile
08	--	--	--	--	--	NA/PS	--
09	--	--	--	--	--	NA/PS	--

NA/PS- Not Analyzed/Positive Stop

Reporting limit- asbestos present at 1%

ND<1% - asbestos was not detected

Trace- asbestos was observed at level of less than 1%

Note: Polarized-light microscopy is not consistently reliable in detecting asbestos in floor coverings and similar non-friable organically bound materials. In those cases, negative results must be confirmed by quantitative transmission electron microscopy.

The Laboratory at TRC follows the EPA's Interim Method for the Determination of Asbestos in Bulk Insulation (1982), and the EPA recommended Method for the Determination of Asbestos in Bulk Building Materials (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey which utilizes polarized light microscopy (PLM). Our analysts have completed an accredited course in asbestos identification. TRC's Laboratory is accredited under the National Voluntary Laboratory Accreditation Program (NVLAP), for Bulk Asbestos Fiber Analysis, NVLAP Code 18/A01, effective through June 30, 2006. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through December 1, 2005. Asbestos content is determined by visual estimate unless otherwise indicated. Quality Control is performed in-house on at least 10% of samples and the QC data related to the samples is available upon written request from the client.

This report shall not be reproduced, except in full, without the written approval of TRC. This report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report relates only to the items tested.

**TRC LABORATORY ASBESTOS ANALYTICAL CERTIFICATIONS**

CT #PH-0426

MA #AA00052

NY #10980

RI #AAL-007C3


AIHA #100122


NVLAP #101424-0

VT #AL014538

Analyst: Kathleen Williamson

QC Analyst: Kathleen Williamson

Reviewed by:   
Laboratory Analyst

Approved 

Signatory: Henry J. Laliberte  
Laboratory Manager

Date Issued: 11/4/05