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REPORT

INVESTIGATIVE SURVEY FOR ASBESTOS CONTAINING MATERIALS AND LEAD BASED PAINT BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT

PROJECT NO. 165-313

Prepared for

State of Connecticut
Department of Transportation
Newington, Connecticut

Prepared by

TRC Environmental Corporation
Windsor, Connecticut

January 2003

INVESTIGATIVE SURVEY FOR ASBESTOS CONTAINING MATERIALS AND LEAD BASED PAINT BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT

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Prepared for
State of Connecticut Department of Transportation
Newington, Connecticut

Prepared by
TRC Environmental Corporation
Windsor, Connecticut

Henry J. Laliberte
Task Manager

Edmund J. Burke, P.E.
Project Manager

TRC Project No. 27550-2546-00710
January 2003

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095
Telephone (860) 298-9692
Facsimile (860) 298-6399

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PROJECT OUTLINE

DOT Project No.:	165-313
Assignment No.:	501-2546
DOT Project Manager:	Amie Maines, P.E.
Project Address:	Bradley International Airport, Terminal A-B Connector, Windsor Locks, Connecticut
TRC Project No.:	27550-2546-00710
Asbestos Inspector:	Thomas J. Martin (CT Asbestos License No. 000014)
Lead Inspector:	Thomas J. Martin (CT Lead Inspector License No. 002079)
Dates of Inspection:	December 11, 2002 and December 13, 2002
Asbestos Identified:	No
Lead Based Paint Identified:	Yes
Gen. Bldg. Mat. Haz Waste:	No
Other Haz. Waste Identified:	Yes
Historic Significance:	None
Demolition Estimate:	Not Applicable

Additional Notes:
This project involves activities that could impact the construction of the Baggage Make-up Building in areas of the Terminal A – B connector.

TABLES

TABLE 1 BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT			
Sample No.	**Sample Location**	**Homogeneous Material**	**% and Type Asbestos**
01	North-central walkway area	2'x2' Spline ceiling tile	ND<1%
02	South-central walkway area	2'x2' Spline ceiling tile	ND<1%
03	North-central walkway area	2'x2' Spline ceiling tile	ND<1%
04	Northeast walkway area	Spray-on fireproofing	ND<1%
05	Southeast walkway area	Spray-on fireproofing	ND<1%
06	North-central walkway area	Spray-on fireproofing	ND<1%
07	North-central walkway area	Spray-on fireproofing	ND<1%
08	Southwest walkway area	Spray-on fireproofing	ND<1%
09A	North-central walkway area	Sheetrock	ND<1%
09B	North-central walkway area	Joint compound	ND<1%
10A	South-central walkway area	Sheetrock	ND<1%
10B	South-central walkway area	Joint compound	ND<1%
11A	Southwest walkway area	Sheetrock	ND<1%
11B	Southwest walkway area	Joint compound	ND<1%
12A	Northeast walkway area	Black covebase	ND<1%[1]
12B	Northeast walkway area	Covebase mastic	ND<1%[1]
13	Southeast walkway area	Decking patch material	ND<1%
14	Southwest walkway area	Carpet glue	ND<1%[1]
15	Northwest walkway area	Joint compound tape	ND<1%
16	North-central walkway area	Joint compound tape	ND<1%
17	Northeast walkway area	Joint compound tape	ND<1%
18A	Former Munson's store	Gray covebase	ND<1%[1]
18B	Former Munson's store	Covebase mastic	ND<1%[1]
19A	Former Munson's store	12"x12" dark gray floor tile	ND<1%[1]
19-0240	Interconnecting corridor	2'x2' Spline ceiling tile	ND<1%[2]
20-0240	Interconnecting corridor	2'x2' Spline ceiling tile	ND<1%[2]
24-0240	Interconnecting corridor	Spray-on fireproofing	ND<1%[2]

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 Result confirmed by TEM analyses
* Quantified by PLM Point Counting techniques
2 Samples collected on April 30, 1997

TABLE 1 BULK SAMPLE SUMMARY OF SUSPECT ASBESTOS CONTAINING MATERIALS BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT			
Sample No.	**Sample Location**	**Homogeneous Material**	**% and Type Asbestos**
25-0240	Interconnecting corridor	Spray-on fireproofing	ND<1%[2]
26-0240	Interconnecting corridor	Spray-on fireproofing	ND<1%[2]
27-0240	Interconnecting corridor	Spray-on fireproofing	ND<1%[2]

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	Result confirmed by TEM analyses
*	Quantified by PLM Point Counting techniques
2	Samples collected on April 30, 1997

TABLE 2 IDENTIFIED ASBESTOS CONTAINING MATERIALS (>1%) BRADLEY INTERNATIONAL AIRPORT TERMINAL A –B CONNECTOR WINDSOR LOCKS, CONNECTICUT					
Material	**Sampled-Assumed (mo/yr)**	**General Location**	**NESHAP Category**	**AHERA Category**	**Estimated Quantity**
No Asbestos Containing Materials Identified					

**** 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 BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT	
Material	**General Location**
2'x2' spline ceiling tiles	Throughout Terminal A-B Connector
Spray-on fireproofing	Throughout Terminal A-B Connector
Sheetrock with joint compound	Throughout Terminal A-B Connector
Carpet glue	Throughout Terminal A-B Connector
Joint compound tape	Throughout Terminal A-B Connector
12"x12" dark gray floor tile and associated mastic	Former Munson's candy store
Gray covebase and associated mastic	Former Munson's candy store
Black covebase and associated mastic	Throughout Terminal A-B Connector
Decking patch material	Southeast walkway area

TABLE 4 SUMMARY OF LEAD BASED PAINT XRF MEASUREMENTS BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT					
Structure	**No. of Measurements**	**Calibrations**	**Void**	**Lead Detected**	**No Lead Detected**
Terminal A-B Connector	21	7	0	1	13

See Lead Based Paint XRF Measurement Table in Appendix H.

TABLE 5 SUMMARY OF COMPOSITE BUILDING MATERIAL HAZARDOUS WASTE DETERMINATION BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT	
Terminal A-B Connector Bldg. Material Composite (Excluding metal substrates)	**No TCLP for Lead warranted as no XRF readings were above 1.0 mg/cm^2 and therefore the debris is presumed as non-hazardous per CTDEP/USEPA clarification memo of July 22, 1997.**

Each sample was analyzed following the Toxicity Characteristic Leaching Procedure (TCLP) for the Resource Conservation Recovery Act (RCRA) Metals most likely to be present in this type of structure. The sample was a composite of wood, wallboard, brick, flooring, roofing and other building materials and was collected per CTDEP sampling guidelines in approximate percent by weight proportions to represent the building as a whole. The sample did not include any metal components, as metal items should be recycled to promote waste minimization efforts, rather than disposed of, and the recycling operation is exempt from the USEPA RCRA and CTDEP Hazardous Waste regulations. In most instances, the sample will not include foundation materials (concrete/stone/etc.), as these materials are used as clean fill during the demolition process and are therefore not part of the waste disposal stream.

See Appendix I for results.

BDL - Below Detection Limit
ND - Not Detected

TABLE 6 INVENTORY OF ADDITIONAL HAZARDOUS MATERIALS IDENTIFIED BRADLEY INTERNATIONAL AIRPORT TERMINAL A-B CONNECTOR WINDSOR LOCKS, CONNECTICUT				
Quantity	**Size**	**Material/Item**	**General Location**	**Potential Hazard**
152	3'	Fluorescent lights	Throughout Terminal A-B	UW
38	N/a	PCB Ballasts	Throughout Terminal A-B	CT RW

CT RW- Connecticut regulated waste (tires, oil, etc.)
UW- Universal Waste
IH- Inhalation hazard
I- Ignitable - may contain ingredients which are ignitable (materials which have a flashpoint <140°F)
C- Corrosive - may contain ingredients which are either alkaline or acidic (materials with a PH<2 or >12.5)
T- Toxic - may contain ingredients which are harmful if swallowed or which release vapors that can cause irritation

APPENDIX A

DOT ASSIGNMENT

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546
Phone:

Edmund J. Burke
Project Manager
TRC Environmental Corp.
5 Waterside Crossing
Windsor, CT 06095

4/10/2002

Dear Mr. Burke,

Subject: Confirmation of Assignment No.501-2546
Project: 0165-0313-, WindsorLocks Dist: I

This is to confirm that you are authorized to proceed with the subject assignment in accordance with the enclosed budget and schedule. The effective start date for this assignment is 4/10/2002.

Please note that the durations established for each task are base upon available information at the time of assignment. If the schedule shown can be improved upon to more accurately reflect field conditions, please submit your proposed revisions within ten days of this letter.

All eligible costs associated with tasks authorized under this assignment should be billed under the assignment and tasks number(s) shown in the enclosed budget.

Please contact the assignment manager designated in the enclosed Assignment Detail report for additional information. Thank you for your efforts in expediting this assignment.

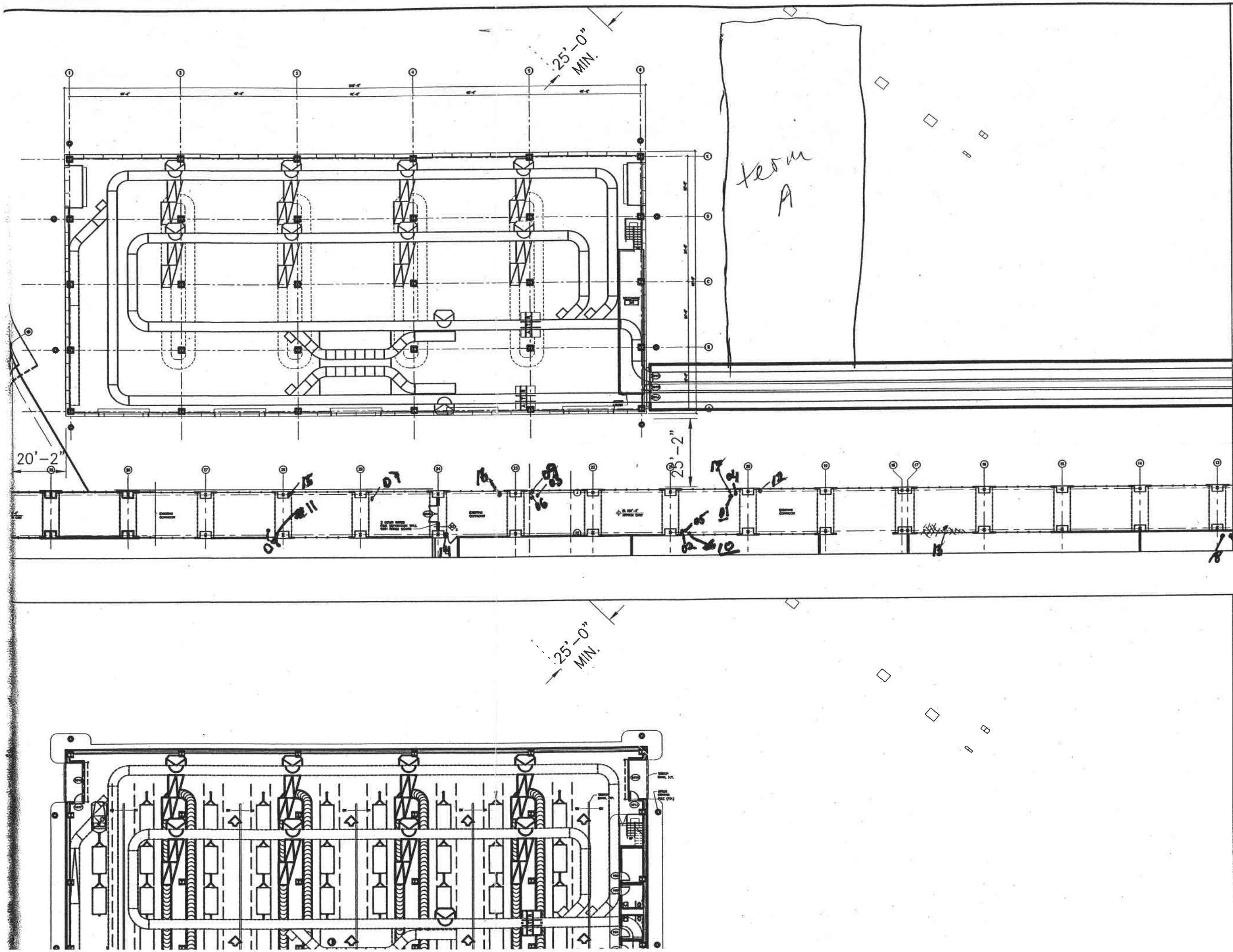
Very truly yours,

Michael W. Lonergan
Env. Compliance Manager
Bureau of Eng. & Hwy Op.

An Equal Opportunity Employer
Printed on Recycled or Recovered Paper

APPENDIX B

SITE SKETCHES


25'-0"
MIN.
Term
A
20'-2"
25'-2"
25'-0"
MIN.

APPENDIX C

LABORATORY AND INSPECTOR ACCREDITATIONS

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

TRC ENVIRONMENTAL CORPORATION

WINDSOR, CT

is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

June 30, 2003

Effective through

David F. Alderman

For the National Institute of Standards and Technology

NVLAP Lab Code: 101424-0

NVLAP-01C (06-01)

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 Lance Cotton

THIS CERTIFICATE IS ISSUED IN THE NAME OF Lance Cotton WHO HAS BEEN DESIGNATED BY THE REGISTRANT 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, 2003 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH

DATED AT HARTFORD, CONNECTICUT, THIS 10th DAY OF JANUARY, 2002 K11

PH- 0426

DIRECTOR, DIVISION OF ENVIRONMENTAL HEALTH

The American Industrial Hygiene Association

is proud to acknowledge that

TRC Environmental Corporation

Windsor, CT

has fulfilled the requirements for and has been formally recognized by AIHA and is technically competent to perform the analyses listed in the following

SCOPE OF ACCREDITATION

INDUSTRIAL HYGIENE
Originally Accredited: 09/01/84

__Metals
__Silica
X Asbestos PCM
X Asbestos PLM
X Organic Solvents
X Diffusive Samples

ENVIRONMENTAL LEAD

__Paint Chips
__Air
__Dust Wipes
__Soil

ENVIRONMENTAL MICROBIOLOGY

__Bacteria
__Fungi

The above named laboratory agrees to perform all analyses listed above in the scope of accreditation according to applicable policy requirements and acknowledges that continued accreditation is dependent on successful participation in the appropriate proficiency testing programs. This laboratory may be contacted to verify the current scope of accreditation, proficiency testing performance and accreditation status. Accreditation by AIHA is not a guarantee of the validity of the data generated by the laboratory.

Laboratory # 100122
Certificate # 259

Accreditation Expires: 09/01/02

Christine A. Kearney
Christine A. Kearney
Chair, Analytical Accreditation Board

James R. Thornton
James R. Thornton, CIH, CSP
President, AIHA

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.

PROSCIENCE ANALYTICAL SERVICES, INC.

LOCATED AT 22 Cummings Park IN Woburn, MA 01801
AND REGISTERED IN THE NAME OF Adrian Stanca
THIS CERTIFICATE IS ISSUED IN THE NAME OF Adrian Stanca WHO HAS BEEN DESIGNATED BY THE REGISTRANT TO BE IN CHARGE OF THE LABORATORY WORK COVERED BY THIS CERTIFICATE OF APPROVAL AS FOLLOWS:

WASTEWATER

Examination for:
TRACE METALS

ASBESTOS
Bulk Identification (PLM)
Water (TEM)
Air-Fiber Counting (PCM + TEM)

PAINT, SOIL, DUST WIPES
Lead

SEE COMPUTER PRINT-OUT FOR SPECIFIC TESTS APPROVED

THIS CERTIFICATE EXPIRES DECEMBER 31, 2002 AND IS REVOCABLE FOR CAUSE BY THE STATE DEPARTMENT OF PUBLIC HEALTH
DATED AT HARTFORD, CONNECTICUT, THIS 27th DAY OF DECEMBER 2000

PH-0209

Thomas H. Furgalski

DIRECTOR, DIVISION OF ENVIRONMENTAL HEALTH

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

PROSCIENCE ANALYTICAL SERVICES, INC.
WOBURN, MA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

AIRBORNE ASBESTOS FIBER ANALYSIS

December 31, 2002
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 200090-0

NVLAP-01C (11-95)

CERTIFICATE OF ACHIEVEMENT

This certifies that

Tom Martin

has successfully completed the

Asbestos Site Inspector Refresher Training
Asbestos Accreditation Under TSCA Title II
40 CFR Part 763

conducted by

ATC Associates Inc.
39 Spruce Street
East Longmeadow, MA 01028
(413) 525-1198

Gregory J. Morach

Principal Instructor

January 31, 2002

Date of Course

January 31, 2003

Expiration Date

Gregory J. Morach

Regional Manager

SIAR-1018

Certificate Number

January 31, 2002

Examination Date

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
THOMAS J. MARTIN

VALIDATION NO. 02-661342
LICENSE NO. 000014
CURRENT THROUGH 02/28/03

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE
COMMISSIONER, DEPT. OF PUBLIC HEALTH

0009102 FP **PRSRT T2 0 0364 06095
THOMAS J. MARTIN
TRC
5 WATERSIDE CROSSING
WINDSOR CT 06095

Dear Licensed/Certified Professional,

Attached you will find your validated license/certification for the coming year. Should you have any questions about your license/certificate renewal, please do not hesitate to write or call:

Department of Public Health
P.O. Box 340308
M.S.#12MQA
Hartford, CT 06134-0308

(860) 509-7603
or
(860) 509-7596

Sincerely,

JOXEL GARCIA, M.D., COMMISSIONER
DEPARTMENT OF PUBLIC HEALTH

INSTRUCTIONS:

1. Detach and sign each of the cards on this form.
2. Display the large card in a prominent place in your office or place of business.
3. The wallet card is for you to carry on your person. If you do not wish to carry the wallet card, place it in a secure place.
4. The employer's copy is for persons who must demonstrate current licensure/certification in order to retain employment or privileges. The employer's card is to be presented to the employer and kept by them as a part of your personnel file. Only one copy of this card can be supplied to you.

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

PURSUANT TO THE PROVISIONS OF THE GENERAL STATUTES OF CONNECTICUT
THE INDIVIDUAL NAMED BELOW IS LICENSED
BY THIS DEPARTMENT AS A

ASBESTOS CONSULTANT - INSPECTOR

THOMAS J. MARTIN

LICENSE NO. 000014
CURRENT THROUGH 02/28/03
VALIDATION NO. 02-661342

SIGNATURE
COMMISSIONER, DEPT. OF PUBLIC HEALTH

EMPLOYER'S COPY

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
THOMAS J. MARTIN

VALIDATION NO. 02-661342
LICENSE NO. 000014
CURRENT THROUGH 02/28/03

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE
COMMISSIONER, DEPT. OF PUBLIC HEALTH

WALLET CARD

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC HEALTH

NAME
THOMAS J. MARTIN

VALIDATION NO. 02-661342
LICENSE NO. 000014
CURRENT THROUGH 02/28/03

PROFESSION
ASBESTOS CONSULTANT-INSPECTOR

SIGNATURE
COMMISSIONER, DEPT. OF PUBLIC HEALTH

CERTIFICATE OF ACHIEVEMENT

This certifies that

Tom Martin

14 Pinney Street, #46, Ellington, CT 06029
041-62-3014

has successfully completed the

INSPECTOR REFRESHER

Training Course
conducted by
ATC Associates Inc.
39 Spruce Street
East Longmeadow, MA 01028
(413) 525-1198

Edward Kolodziej

Principal Instructor

Gregory J. Morsch

Training Manager

March 26, 2002
Date of Course

March 26, 2002
Exam Date

CTLIR-048
Certificate Number

March 26, 2003
Expiration Date

Training received complies with the requirements of the Connecticut Department of Public Health pursuant to Section 477 of the Connecticut General Statutes.

APPENDIX D

ASBESTOS BULK SAMPLE CHAIN OF CUSTODY FORMS

TRC

5 WATERSIDE CROSSING

WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6399

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 26079

PROJECT NUMBER	PROJECT NAME
27550-2546-00710	Bradley International Airport – Terminal A – B Connector

INSPECTOR: (SIGNATURE)	(PRINTED)
Thomas Martin	Thomas J. Martin

TURNAROUND TIME

PLM:		24hr		48hr	X	3day		5day
TEM:		24hr		48hr	X	3day		5day

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM NY NOB 198.1 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
01	12/13/02				North-central walkway area	X					Ceiling tile
02	12/13/02				South-central walkway area	X					Ceiling tile
03	12/13/02				North-central walkway area	X					Ceiling tile
04	12/13/02				Northeast walkway area	X					Spray-on fireproofing
05	12/13/02				Southeast walkway area	X					Spray-on fireproofing
06	12/13/02				North-central walkway area	X					Spray-on fireproofing
06A 07	12/13/02				North-central walkway area	X					Spray-on fireproofing
06B 08	12/13/02				Southwest walkway area	X					Spray-on fireproofing
07 09	12/13/02				North-central walkway area	X		X			Sheetrock/joint compound composite
08 10	12/13/02				South-central walkway area	X		X			Sheetrock/joint compound composite
09 11	12/13/02				Southwest walkway area	X		X			Sheetrock/joint compound composite
10 12	12/13/02				Northeast walkway area	X		X		X	Black covebase and associated mastic

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
Thomas Martin	12/13/02	12/16/02			
(Printed) Thomas J. Martin	Time: 1530	(Printed) Stephen Arist 16:00	(Printed)	Time:	(Printed)

Remarks: Series: 01-03, 04-06B, 07-09, 13-15. Please analyze mastics first.

TRC

5 WATERSIDE CROSSING

WINDSOR, CONNECTICUT 06095
TELEPHONE (860) 298-9692
FAX (860) 298-6399

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 26079

PROJECT NUMBER	PROJECT NAME
27550-2546-00710	Bradley International Airport – Terminal A – B Connector

INSPECTOR: (SIGNATURE)	(PRINTED)
Thomas J. Martin	Thomas J. Martin

TURNAROUND TIME

PLM:		24hr		48hr	X	3day		5day
TEM:		24hr		48hr	X	3day		5day

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM NY NOB 198.1 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
11 13	12/13/02				Southeast walkway area	X					Decking patch material
12 14	12/13/02				Southwest walkway area	X				X	Carpet glue
13 15	12/13/02				Northwest walkway area	X			X		Joint compound tape
14 16	12/13/02				North-central walkway area	X			X		Joint compound tape
15 17	12/13/02				Northeast walkway area	X			X		Joint compound tape
16 18	12/13/02		X		Former Munson's store	X		X		X	Gray covebase and associated mastic
17 19	12/13/02		X		Former Munson's store	X		X		X	12"x12" dark gray floortile w/ associated mastic

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
Thomas J. Martin	12/13/02				
(Printed) Thomas J. Martin	Time: 1530	(Printed)	(Printed)	Time:	(Printed)

Remarks: Series: 01-03, 04-06B, 07-09, 13-15. Please analyze mastics first.

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn MA 01801 Ph 781-935-3212 Fx 781-932-4857

Date: 12/20/02

TEM Bulk Sample Chain Of Custody Record

Client: TRC

Client Job # 27556-2546-00710

Client Job Ref./Loc CT DOT - Bradley International Airport

Client P.O. #

Relinquished By X Stephen Arnold Recieved By X

Report to Thomas Martin

Sampler's Name Thomas Martin

Analysis Type: (Please Circle) Chatfield N.O.B., N.Y.S. Qualitative

IMPORTANT!! Turn Around Time Requested, (Circle) <12 Hour <24 Hour <48 Hour <3 Day <5 Day Other_____

Client I.D.#	Lab I.D.#	Description	Location	For Lab Use Only: Acceptable on receipt	For Lab Use Only: Comments
12	26079	Cove base + Mastic	See Chain of Custody		
14		Carpet Glue			
18		Cove base + Mastic			
19		Tile + Mastic			

For Lab Use Only

# Spies	Total	Client #	Batch #	Results Reported	Comments

AT: 18602986399

TRC Environmental Consultants, Inc.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	PARAMETERS	
13707-0240-0000	Bradley International Airport, Terminal A		1074 Lab No. 17977
SAMPLERS: (Signature) Henry Lalibeate	(Printed) Henry Lalibeate		

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PLM	Analyze							REMARKS
01-0240	4/30/97			✓	Baggage Claim Areas	1	✓	✓							2'x2' ceiling tile (SPLINE)
02-0240				✓		1	✓								
03-0240				✓		1	✓								
04-0240				✓		1	✓	✓							Sprayed on Fireproofing
05-0240				✓		1	✓								
06-0240				✓		1	✓								
07-0240				✓		1	✓								
08-0240				✓		1	✓								
09-0240				✓		1	✓	✓							Acoustical wall covering w/mastic
10-0240				✓		1	✓								
11-0240				✓		1	✓								
12-0240				✓	Baggage Claims - Mens Restroom	1	✓	✓							Ceramic wall tile mastic

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Henry Lalibeate	5/1/97				
(Printed) Henry Lalibeate		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Lance Cotton	5/1/97 06:38	Do 01-03 until positive Do 04-08 " " Do 09-11 " " Do 12-14 " "
(Printed)		(Printed) Lance Cotton		

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

TRC Environmental Consultants, Inc.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	PARAMETERS
13707-0240-00001	Bradley International Airport - Terminal A	2 of 4 Lab# 17977

SAMPLERS: (Signature) Henry Laliberte (Printed) Henry Laliberte

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PLM	Analyze							REMARKS
13-0240	4/30/97			✓	Baggage Claims - Mens Restroom	1	✓								ceramic wall tile mastic
14-0240				✓		1	✓								
15-0240				✓	Mens Restroom in Upper Terminal Level	1	✓	✓							
16-0240				✓		1	✓								
17-0240				✓		1									
18-0240				✓		1	✓	✓							2'x2' ceiling tile (spline)
19-0240				✓	Interconnecting Corridor	1	✓								
20-0240				✓	~~[illegible]~~ Interconnecting corridor ~~[illegible]~~	1	✓								
21-0240				✓	mens restroom - upper terminal level	1	✓	✓							Acousticord wall covering / mastic
22-0240				✓	near womens restroom - upper terminal level	1	✓								
23-0240				✓	Near Restaurant Area - upper terminal level	1	✓								
24-0240				✓	Interconnecting Corridor	1	✓	✓							sprayed on fireproofing

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Henry Laliberte	5/1/97				
(Printed) Henry Laliberte		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Lance Cotton	5/1/97 6:38 pm	Do 15-17 until positive Do 18-20 " " Do 21-23 " " Do 24-27 " "
(Printed)		(Printed) Lance Cotton		

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

TRC Environmental Consultants, Inc.

CHAIN OF CUSTODY RECORD

PROJECT NO.: 13707-0240-0001

PROJECT NAME: Bradley Interconnector / Airport Terminal

PARAMETERS

3 of 4

Lab # 17977

SAMPLERS: (Signature) Henry Lalibeste

(Printed) Henry Lalibeste

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PLM	Analyze							REMARKS
25-0240	4/30/97			✓	Interconnecting Corridor	1	✓								sprayed on fireproofing
26-0240				✓		1	✓								
27-0240				✓		1	✓								
28-0240				✓	UPPER Level – Near Shops	1	✓	✓							2'x4' ceiling tile
29-0240				✓		1	✓								
30-0240				✓		1	✓								
31-0240				✓	Concourse C – mens restroom	1	✓	✓							2'x2' suspended ceiling tile
32-0240				✓		1	✓								
33-0240				✓		1	✓								
34-0240				✓	Concourse C	1	✓	✓							sprayed on fireproofing
35-0240				✓		1	✓								
36-0240				✓		1	✓								

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Henry Lalibeste	5/1/97				
(Printed) Henry Lalibeste		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Lance Cotton	5/1/97 10:35 pm	DO 28-30 until positive DO 31-33 " " DO 34-36 " "
(Printed)		(Printed) Lance Cotton		

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

TRC Environmental Consultants, Inc.

CHAIN OF CUSTODY RECORD

PROJECT NO.	PROJECT NAME	PARAMETERS	4 of 4
13707-0240-0000	Bradley International Airport - Terminal A		Lab #: 17977

SAMPLERS: (Signature) Henry Laliberte (Printed) Henry Laliberte

FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	PLM Analyze								REMARKS
37-0240	4/30/97			✓	Near Restaurant Area - upper Terminal Level	1	✓	✓							Cove base w/mastic

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Henry Laliberte	5/1/97				
(Printed) Henry Laliberte		(Printed)	(Printed)		(Printed)

Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks
		Lance Cotton	5/1/97 6:38pm	DO 37
(Printed)		(Printed) Lance Cotton		

Distribution: Original Plus One Accompanies Shipment (white and yellow); Copy to Coordinator Field Files (pink).

APPENDIX E

PLM/DS LABORATORY ANALYSIS REPORT

TRC ENVIRONMENTAL CORPORATION
Environmental Chemistry Laboratory
5 Waterside Crossing
Windsor, CT 06095
(860) 298-6345
AIHA Laboratory Certificate No. 259, Lab ID #100122
NIST-NVLAP Code #101424-0

BULK ASBESTOS ANALYSIS REPORT

CLIENT: Bradley International Airport

Site: Terminal A - B Connector
Lab Log #: 26079
Project #: 27550-2546-00710
Date Received: 12/16/02
Date Analyzed: 12/19/02

RESULTS

Sample No.	Color	Homogeneous	Multi-Layered	Layer No.	Other Matrix Mat'ls	Asbestos %	Asbestos Type
01	White/Grey	Yes	No	--	20% cellulose 40% mineral wool	ND<1%	None
02	White/Grey	Yes	No	--	20% cellulose 40% mineral wool	ND<1%	None
03	White/Grey	Yes	No	--	20% cellulose 40% mineral wool	ND<1%	None
04	Grey	Yes	No	--	2% cellulose 60% mineral wool	ND<1%	None
05	Grey	Yes	No	--	2% cellulose 60% mineral wool	ND<1%	None
06	Grey	Yes	No	--	2% cellulose 60% mineral wool	ND<1%	None
07	Grey	Yes	No	--	2% cellulose 60% mineral wool	ND<1%	None
08	Grey	Yes	No	--	2% cellulose 60% mineral wool	ND<1%	None
09	White (joint compound)	No	Yes	1	1% cellulose	ND<1%	None
09	Light Tan (sheetrock)	No	Yes	2	2% cellulose	ND<1%	None
10	White	Yes	No	--	1% cellulose	ND<1%	None
11	White (joint compound)	No	Yes	1	1% cellulose	ND<1%	None
11	Light Tan (sheetrock)	No	Yes	2	2% cellulose	ND<1%	None
12	Tan (mastic)	No	Yes	1	1% cellulose	ND<1%	None
12	Black (cove base)	No	Yes	2	--	ND<1%	None
13	Grey	Yes	No	--	10% cellulose 2% fiberglass	ND<1%	None
14	Yellow	Yes	No	--	1% cellulose	ND<1%	None
15	Tan	Yes	No	--	70% cellulose	ND<1%	None

16	Tan	Yes	No	--	70% cellulose	ND<1%	None
17	Tan	Yes	No	--	70% cellulose	ND<1%	None
18	Yellow (mastic)	No	Yes	1	2% cellulose	ND<1%	None
18	Grey (cove base)	No	Yes	2	--	ND<1%	None
19	Yellow (mastic)	No	Yes	1	5% cellulose	ND<1%	None
19	Blue/Green (tile)	No	Yes	2	--	ND<1%	None

See the enclosed raw data for other sample properties.

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 (1981), and the EPA recommended A 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, 2003. TRC is an American Industrial Hygiene Association (AIHA) accredited lab for PLM effective through September 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.

Analyst: Stephen R. Arienti

QC Analyst: Kathleen Williamson KW

Reviewed by: Lance R. Cotton
Lance R. Cotton
Laboratory Supervisor

Date Issued: 12/23/02

BULK ASBESTOS ANALYSIS REPORT

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Client: CT DOT
Address: Bradley International Airport

Date Received: 05/01/97
Date Analyzed: 05/13/97

ANALYST(S):

Daniel S. Plimpton (Print) — Daniel S. Plimpton (Signature)

(Print) — (Signature) QC 5/14/97 DS

Project No.: 13707-0240-00001

Log No.: 17977

QC 5/14/97 DS

Field I.D.	01-0240	02-0240	03-0240	04-0240
Reference No.	13-16/DP	13-16/DP	13-16/DP	13-17/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	Grey	Grey	Grey	Grey
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass	40%	40%	40%	40%
Cellulose	40%	40%	40%	40%
Mineral Wool				
Other				
Non-Fibrous Materials %:	20%	20%	20%	20%

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.

Reviewed by: Margaret F. Flanagan, Quality Control Manager or Lance R. Cotton, Laboratory Supervisor

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples
U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

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TRC LABORATORY ASBESTOS ANALYTICAL CERTIFICATIONS
CT #PH-0426 MA #AA000052 NY #10980 RI #AAL-007C3 AIHA #6940 NVLAP #1424 VT #AAS-2095

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

Field I.D.	05-0240	06-0240	07-0240	08-0240
Reference No.	13-17/DP	13-17/DP	13-18/DP	13-18/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	Grey	Grey	Grey	Grey
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass	40%	40%	40%	40%
Cellulose	40%	40%	40%	40%
Mineral Wool				
Other				
Non-Fibrous Materials %:	20%	20%	20%	20%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples
U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

Field I.D.	09-0240	10-0240	11-0240	12-0240
Reference No.	13-18/DP	13-19/DP	13-19/DP	13-20/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	White & Tan	White & Tan	White & Tan	Brown
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass				
Cellulose	10%	10%	10%	25%
Mineral Wool				
Other				
Non-Fibrous Materials %:	90%	90%	90%	75%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples

U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

Field I.D.	13-0240	14-0240	15-0240	16-0240
Reference No.	13-20/DP	13-20/DP	13-21/DP	13-21/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	Brown	Brown	Tan	Tan
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass				
Cellulose	25%	25%	20%	20%
Mineral Wool				
Other				
Non-Fibrous Materials %:	75%	75%	80%	80%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples
U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC LABORATORY ASBESTOS ANALYTICAL CERTIFICATIONS
CT #PH-0426 MA #AA000052 NY #10980 RI #AAL-007C3 AIHA #6940 NVLAP #1424 VT #AAS-2095

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

Field I.D.	17-0240	18-0240	19-0240	20-0240
Reference No.	13-21/DP	13-22/DP	13-22/DP	13-22/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	Tan	Grey	Grey	Grey
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass		40%	40%	40%
Cellulose	20%	40%	40%	40%
Mineral Wool				
Other				
Non-Fibrous Materials %:	80%	20%	20%	20%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples

U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

Field I.D.	21-0240	22-0240	23-0240	24-0240
Reference No.	13-23/DP	13-23/DP	13-24/DP	13-24/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	White & Tan	White & Tan	White & Tan	Grey
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass				70%
Cellulose	30%	30%	30%	10%
Mineral Wool				
Other				
Non-Fibrous Materials %:	70%	70%	70%	20%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples
U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977
QC 5/14/97 DS

Field I.D.	25-0240	26-0240	27-0240	28-0240
Reference No.	13-24/DP	13-25/DP	13-25DP	13-25/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	Grey	Grey	Grey	Grey
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass	70%	70%	70%	40%
Cellulose	10%	10%	10%	40%
Mineral Wool				
Other				
Non-Fibrous Materials %:	20%	20%	20%	20%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples
U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

Field I.D.	29-0240	30-0240	31-0240	32-0240
Reference No.	13-26/DP	13-26/DP	13-26/DP	13-27/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	Grey	Grey	Grey	Grey
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass	40%	40%	40%	40%
Cellulose	40%	40%	40%	40%
Mineral Wool				
Other				
Non-Fibrous Materials %:	20%	20%	20%	20%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples
U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

Field I.D.	33-0240	34-0240	35-0240	36-0240
Reference No.	13-27/DP	13-27/DP	13-28/DP	13-28/DP
Homogeneous	Yes	Yes	Yes	Yes
M-Layered	No	No	No	No
Layer No.	--	--	--	--
Color	Grey	Grey	Grey	Grey
Asbestos Present	No	No	No	No
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%	ND<1%	ND<1%	ND<1%
Other Fibrous Material & %				
Fiberglass	40%	80%	80%	80%
Cellulose	40%	5%	5%	5%
Mineral Wool				
Other				
Non-Fibrous Materials %:	20%	15%	15%	15%

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples

U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

TRC Environmental Corporation
5 Waterside Crossing
Windsor, Connecticut 06095

Log No.: 17977

QC 5/14/97 DS

Field I.D.	37-0240			
Reference No.	13-28/DP			
Homogeneous	Yes			
M-Layered	No			
Layer No.	--			
Color	Orange & Grey			
Asbestos Present	No			
Asbestos Type & %				
Chrysotile				
Amosite				
Crocidolite				
Anthophyllite				
Tremolite				
Actinolite				
Total Asbestos	ND<1%			
Other Fibrous Material & %				
Fiberglass				
Cellulose	5%			
Mineral Wool				
Other				
Non-Fibrous Materials %:	95%			

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.

Method: 40 CFR Interim Method of the Determination of Asbestos in Bulk Insulation Samples

U.S. Environmental Protection Agency "Method for the Determination of Asbestos in Bulk Building Materials" (EPA/600/R-93/116), July 1993, R.L. Perkins and B.W. Harvey.

APPENDIX F

TEM LABORATORY ANALYSIS REPORT

ProScience Analytical Services, Inc

Thomas Martin
TRC Environmental Corp. (CT)
5 Waterside Crossing
Windsor, CT 06095

December 27, 2002

Dear Thomas Martin,

Results of samples you described and submitted to ProScience Analytical Services, Inc. are shown on the enclosed data sheets. The analytical results in this report apply to the items tested only.
The listed samples were prepared and analyzed in compliance with the New York State Transmission Electron Microscope Method for Identifying and Quantitating Asbestos in Non-Friable Organically Bound Bulk Samples. This method is used for the determination of weight percent of asbestos in non-friable materials.
The sample is processed to remove non-asbestos interference. The remaining residue is examined using a Philips 300 transmission electron microscope equipped with selected area electron diffraction (SAED) and an EDAX 9100 energy dispersive x-ray analyzer.

The following are reported: identification numbers, type of material, color or the sample, initial weight of the sample, weight percent of organic material lost by ashing, weight percent of carbonates lost by acid dissolution, weight percent of non-fibrous/non asbestos inorganic material, total weight percent of asbestos in the original sample, and the type(s) of asbestos, if any.
The EPA recognizes asbestos as the following: actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite. To be considered asbestos containing, a material must be determined to contain greater than one percent asbestos.

The quality control data related to the samples analyzed are available for review upon the written request of the client. ProScience Analytical Services, Inc. and its personnel assume no responsibility for potential sample contamination, misuse, misinformation, or misrepresentation by the client. The enclosed results may not be used under any circumstances as product endorsement by any US government agency including NIST/NVLAP. This report may not be reproduced, except in its entirety, without permission of the ProScience Analytical Services, Inc. Laboratory Director.

Please contact me if you have any questions regarding this report or related information.

Sincerely,

Michael Zappala, Laboratory Supervisor

Vlad Stanca, Laboratory Manager

Adrian Stanca, Laboratory Director

Enclosure:
BATCH NUMBER : NT 3776 CLIENT PROJECT ID: 27550-2546-00710
Client #: 297
NVLAP ID# 200090-0; CT ID# PH-0209; MA ID# AA000156; ME ID# LB-055; ME ID# LA-056; AIHA ID# 102754; VT ID# AL016876; PH ID# 218(TEM,PLM); ELAP ID# 11632; RI ID# 186.

22 Cummings Park • Woburn, Massachusetts • 01801 • Phone (781)935-3212

ProScience Analytical Services, Inc

22 Cummings Park, Woburn, Massachusetts 01801
781-935-3212 ~ Fax: 781-932-4857 ~ E-Mail PASI96@aol.com

Client #: 297
Client Project: 27550-2546-00710
Client Reference: Bradley Int. Airport-Terminal A-B Connector
Client Name: TRC Environmental Corp. (CT)

Method: **TEM NOB**
Batch: **NT 3776**
Date Analyzed: 12/27/2002
Date Received: 12/23/2002
Date of Report: 12/27/2002

LAB ID	Field ID	Description:	Color	Initial Sample Weight	% Asbestos Types						% Other Non-asb.	% Organic	% Carb.	**Total % Asbestos**	Analyzed /Charged	Preped/ Charged
					CHR	AMO	ACT	CRO	ANT	TRE						
NT29950	12	Black cove base		.2457	.00	.00	.00	.00	.00	.00	50.30	43.47	6.23	**ND**	Yes	No
NT29951	12M	Associated mastic		.1735	.00	.00	.00	.00	.00	.00	1.73	22.54	75.73	**ND**	Yes	No
NT29952	14	Carpet glue		.0591	.00	.00	.00	.00	.00	.00	32.32	61.08	6.60	**ND**	Yes	No
NT29953	18	Gray cove base		.1557	.00	.00	.00	.00	.00	.00	1.80	46.05	52.15	**ND**	Yes	No
NT29954	18M	Associated mastic		.0559	.00	.00	.00	.00	.00	.00	21.29	44.72	33.99	**ND**	Yes	No
NT29955	19	12"x12" Dark gray floor tile		.6545	.00	.00	.00	.00	.00	.00	14.23	23.45	62.32	**ND**	Yes	No

Comments: Sample 19M not analyzed due to lack of sample.

Mike Zappala, Analyst

Asbestos Codes: CHR = Chrysotile AMO = Amosite CRO = Crocidolite ACT = Actinolite TRE = Tremolite ANT = Anthophyllite TR = Trace = < 1% ND = None Detected

NT 3770

ProScience Analytical Services, Inc.

22 Cummings Park, Woburn MA 01801 Ph 781-935-3212 Fx 781-932-4857

Date: 12/20/02

TEM Bulk Sample Chain Of Custody Record

Client: TRC

Client Job # 27556-2546-00710

Client Job Ref./Loc CT DOT - Bradley International Airport

Client P.O. #

Relinquished By X Stephen Arnold Recieved By X [illegible] 9:00am 12/23/02

Report to Thomas Martin

Sampler's Name Thomas Martin

Analysis Type: (Please Circle) Chatfield N.O.B., N.Y.S. Qualitative

IMPORTANT!! Turn Around Time Requested, (Circle) <12 Hour <24 Hour <48 Hour <3 Day <5 Day Other_____

Client I.D.#	Lab I.D.#	Description	Location	For Lab Use Only: Acceptable on receipt	For Lab Use Only: Comments
12	26079	Cove base + Mastic	See Chain of Custody		
14		Carpet Glue			
18		Cove base + Mastic			
19		Tile + Mastic			

For Lab Use Only	# Spies	Total	Client #	Batch #	Results Reported	Comments

AT: 18602986399

MT 3776

TRC

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

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 26079

PROJECT NUMBER	PROJECT NAME
27550-2546-00710	Bradley International Airport – Terminal A – B Connector

INSPECTOR: (SIGNATURE)	(PRINTED)
Thomas J. Martin	Thomas J. Martin

TURNAROUND TIME								
PLM:		24hr		48hr	X	3day		5day
TEM:		24hr		48hr	X	3day		5day

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PARAMETERS: PLM EPA 600/R93/116 (POSITIVE STOP)	PLM NY NOB 198.1 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
01	12/13/02				North-central walkway area	X					Ceiling tile
02	12/13/02				South-central walkway area	X					Ceiling tile
03	12/13/02				North-central walkway area	X					Ceiling tile
04	12/13/02				Northeast walkway area	X					Spray-on fireproofing
05	12/13/02				Southeast walkway area	X					Spray-on fireproofing
06	12/13/02				North-central walkway area	X					Spray-on fireproofing
06A 07	12/13/02				North-central walkway area	X					Spray-on fireproofing
06B 08	12/13/02				Southwest walkway area	X					Spray-on fireproofing
07 09	12/13/02				North-central walkway area	X		X			Sheetrock/joint compound composite
08 10	12/13/02				South-central walkway area	X		X			Sheetrock/joint compound composite
09 11	12/13/02				Southwest walkway area	X		X			Sheetrock/joint compound composite
10 12	12/13/02				Northeast walkway area	X		X		X	Black covebase and associated mastic

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
Thomas J. Martin	12/13/02	12/16/02			
(Printed) Thomas J. Martin	Time: 1530	(Printed) Stephen Arist 16:00	(Printed)	Time:	(Printed)

Remarks: Series: 01-03, 04-06B, 07-09, 13-15. Please analyze mastics first.

NT 3776

TRC

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

ASBESTOS BULK SAMPLING CHAIN OF CUSTODY

LAB ID #. 26079

PROJECT NUMBER	PROJECT NAME
27550-2546-00710	Bradley International Airport – Terminal A – B Connector

TURNAROUND TIME								
PLM:		24hr		48hr	X	3day		5day
TEM:		24hr		48hr	X	3day		5day

INSPECTOR: (SIGNATURE) Thomas J. Martin

(PRINTED) Thomas J. Martin

FIELD SAMPLE NUMBER	DATE	TIME	TYPE COMP	TYPE GRAB	SAMPLE LOCATION	PLM EPA 600/R93/116 (POSITIVE STOP)	PLM NY NOB 198.1 (w/ gravimetric reduction) (POSITIVE STOP)	ANALYZE BY LAYER	POINT COUNT (IF >1% & <10%)	TEM NY NOB 198.4 (IF PLM SERIES NEG)	MATERIAL
~~11~~ 13	12/13/02				Southeast walkway area	X					Decking patch material
~~12~~ 14	12/13/02				Southwest walkway area	X				X	Carpet glue
~~13~~ 15	12/13/02				Northwest walkway area	X			X		Joint compound tape
~~14~~ 16	12/13/02				North-central walkway area	X			X		Joint compound tape
~~15~~ 17	12/13/02				Northeast walkway area	X			X		Joint compound tape
~~16~~ 18	12/13/02		X		Former Munson's store	X		X		X	Gray covebase and associated mastic
~~17~~ 19	12/13/02		X		Former Munson's store	X		X		X	12"x12" dark gray floortile w/ associated mastic

Relinquished by: (Signature)	Date:	Received by: (Signature)	Relinquished by: (Signature)	Date:	Received by: (Signature)
Thomas J. Martin	12/13/02				
(Printed) Thomas J. Martin	Time: 1530	(Printed)	(Printed)	Time:	(Printed)

Remarks: Series: 01-03, 04-06B, 07-09, 13-15. Please analyze mastics first.

APPENDIX G

LEAD BASED PAINT XRF MEASUREMENT TABLE

Lead Based Paint Measurement Summary Table

TRC Environmental Corporation

Device:	Niton XL-309 X Ray Fluorescence (XRF) Spectrum Analyzer, Serial #U688
Site:	Bradley International Airport, Terminal A-B Connector, Windsor Locks, CT
Project # :	27550-2546-00710
Date:	12/13/02
Inspector:	Thomas J. Martin (State of Connecticut License #: 002079)
Ranges:	(NEG<INC<POS): 0.0<0.05<0.05 (OSHA Compliance)

Number	Room	Side	Structure	Feature	Material	Color	Condition	Result	Reading (mg/cm2)	Precision (mg/cm2)	Depth Index	Duration (sec)	Date/Time
1			Internal calibration						NA		0.0	42.9	12/13/02 9:10
2			0.0 calibration						0.0	0.0	1.0	7.5	12/13/02 9:10
3			0.3 calibration						0.4	0.1	1.1	11.7	12/13/02 9:12
4			1.0 calibration						1.3	0.2	1.1	17.6	12/13/02 9:13
5	Terminal A-B Connector	C	wall		sheetrock	white	intact	NEG	0.0	0.0	1.0	5.5	12/13/02 9:15
6	Terminal A-B Connector	A	wall		sheetrock	lt. Blue	intact	NEG	0.0	0.1	1.6	10.1	12/13/02 9:16
7	Terminal A-B Connector	A	wall		sheetrock	lt. Blue	intact	NEG	0.0	0.1	1.0	12.4	12/13/02 9:17
8	Terminal A-B Connector	A	wall	lower	sheetrock	blue	intact	NEG	0.0	0.1	1.9	14.7	12/13/02 9:20
9	Terminal A-B Connector	A	wall	lower	sheetrock	blue	intact	NEG	0.0	0.1	1.0	12.4	12/13/02 9:20
10	Terminal A-B Connector	A	Emergency exit	door	metal	blue	intact	NEG	0.0	0.1	1.1	9.8	12/13/02 9:21
11	Terminal A-B Connector	A	Emergency exit	frame	metal	gray-blue	intact	NEG	0.0	0.1	2.7	14.5	12/13/02 9:21
12	Terminal A-B Connector	A	wall		sheetrock	wallpaper	intact	NEG	0.0	0.0	1.0	10.2	12/13/02 9:25
13	Terminal A-B Connector	C	wall		sheetrock	wallpaper	intact	NEG	0.0	0.0	1.0	12.5	12/13/02 9:26
14	Terminal A-B Connector	C	wall		sheetrock	wallpaper	intact	NEG	0.0	0.0	1.0	12.4	12/13/02 9:27
15	Terminal A-B Connector	A	wall		sheetrock	wallpaper	intact	NEG	0.0	0.0	1.0	5.5	12/13/02 9:28
16	Terminal A-B Connector	A	wall		sheetrock	white	intact	NEG	0.0	0.0	1.0	5.5	12/13/02 9:30
17	Terminal A-B Connector	A	door	frame	metal	gray-blue	intact	**POS**	0.1	0.2	4.7	6.6	12/13/02 9:30
18	Terminal A-B Connector	A	fire hose compartment	door	metal	beige	intact	NEG	0.0	0.1	1.0	7.5	12/13/02 9:34
19			0.0 calibration						0.0	0.0	1.0	5.3	12/13/02 9:44
20			0.3 calibration						0.3	0.1	1.0	5.2	12/13/02 9:44
21			1.0 calibration						1.2	0.2	1.1	21.8	12/13/02 9:44

All XRF readings <0.1 mg/cm2 = Below Detectable Levels (BDL)

Side A = Street side; Sides B,C,D follow clockwise