CUY-90-14.90

PID 77332/85531

APPENDIX EC-21

Asbestos Survey of Bridges 10, 14 & 15
(Contract Document)

State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

Innerbelt Bridge
Construction Contract Group 1 (CCG1)

Revision Date: April 9, 2010

2 - Addendum No. 2 - New Appendix

FINDINGS FROM AN ASBESTOS SURVEY

Three (3) Bridges:

CUY – Abbey Avenue – Abbey Avenue Bridge over CSX
CUY – 10-16.85 – Carnegie Avenue Bridge over GCRTA
CUY – 77-15.97L – Interstate 77 Southbound Bridge over East 14th Street

CUY-INNERBELT PROJECT AREA

[PID 77510 / Task Order #15885-8]

APRIL 2010

Prepared for:

Ohio Department of Transportation
District 12
5500 Transportation Boulevard
Garfield Heights, OH 44125

Prepared by:

HzW Environmental
Consultants LLC

6105 Heisley Road ♦ Mentor, Ohio 44060
440-357-1260 ♦ Fax 440-357-1510

H10002-06

HzW Environmental
Consultants, LLC

April 9, 2010

Mr. Mark Alan Carpenter
Ohio Department of Transportation, District 12
5500 Transportation Boulevard
Garfield Heights, Ohio 44125

Subject: ***Findings From an Asbestos Survey Conducted at Three (3) Bridges Associated with the CUY-Innerbelt Project: CUY-Abbey Road - Avenue Bridge over CSX; CUY-10-16.85 - Carnegie Avenue Bridge over GCRTA; and CUY-77-15.97L – Interstate 77 Southbound Bridge over East 14th Street (HzW Project No. H10002-06)***

Dear Mr. Carpenter:

In accordance with our cost proposal dated February 16, 2010, HzW Environmental Consultants, LLC (HzW) conducted an asbestos survey at three (3) bridges associated with the CUY – Innerbelt Project Area for the Ohio Department of Transportation District 12. The three (3) bridges consisted of the following:

1. CUY – Abbey Avenue – Abbey Avenue Bridge over CSX
2. CUY – 10-16.85 – Carnegie Avenue Bridge over GCRTA
3. CUY – 77-15.97L – Interstate 77 Southbound Bridge over East 14th Street

Discussions of the methods of investigation, the findings and applicable recommendations are provided separately below.

METHODS OF INVESTIGATION

As part of the survey, HzW requested the original construction plans for the bridges from the Ohio Department of Transportation (ODOT) District 12 to assist in identifying asbestos-containing materials (ACMs) and suspect containing ACMs used during construction. The original construction plans for the bridges were located by a representative of ODOT and, therefore, were reviewed by HzW. Representatives of HzW, certified by the Ohio Department of Health (ODH) as Asbestos Hazard Evaluation Specialists, subsequently conducted a physical inspection of the subject bridges during April 2010 to visually identify and sample accessible suspect ACMs. A photographic log depicting the subject bridges was compiled during the physical inspection and is included as **Attachment 1**.

Based on the physical inspection conducted at the subject bridges, subsequent bulk samples were collected of any accessible building materials suspected of containing asbestos. The bulk samples were submitted to International Asbestos Testing Laboratories (IATL) of Mt. Laurel, New Jersey, for analysis of asbestos content by polarized light microscopy (PLM) using the Environmental Protection Agency (EPA) Method 600/R-93/116. In accordance with the United States EPA National Emissions Standard for Hazardous Air Pollutants (NESHAP), ACMs identified by PLM as containing less than 10 percent asbestos were subsequently analyzed by point count methodology.

FINDINGS

The findings of the asbestos survey are presented below. These findings are based on HzW's review of the available construction plans, physical inspection of each bridge and the analytical results for any bulk samples collected. A copy of the laboratory analytical reports for the bulk samples collected is included as **Attachment 2**.

It should be noted that all suspect building materials identified during the construction plan review are assumed to contain asbestos until they can be accessed and physically touched and inspected and rendered nonsuspect building materials and/or sampled and subsequently analyzed by polarized light microscopy and found not to contain greater than one (1) percent asbestos.

CUY – Abbey Avenue – Abbey Avenue Bridge over CSX

Based on a review of various construction plans with unknown dates (Pages 1 – 37A, 1-14, 1-4, 1, 1, 1, 1-3) for this bridge, eleven (11) suspect ACMs were noted as being used during construction of the bridge. These suspect ACMs consisted of the following:

1. ½-inch Premolded Expansion Joint Filler – located in approach slabs and concrete walkway. Quantity of this suspect material located on the bridge structure is unknown.
2. ¼-inch Preformed Expansion Joint Filler – located at parapets. Quantity of this suspect material located on the bridge structure is unknown.
3. 1-inch Preformed Expansion Joint Filler – outlined in driveway details. Quantity of this suspect material located on the bridge structure is unknown.
4. 1-inch Preformed Expansion Joint Filler – located in abutments. Quantity of this suspect material located on the bridge structure is 138 square feet.
5. Preformed Expansion Joint Filler (deflection joints shall either be ¼-inch gray sponge rubber or ¼-inch gray cellular polyvinyl chloride sponge) – located in fencing parapet. Quantity of this suspect material located on the bridge structure is unknown.
6. 6-inch Perforated Helical Corrugated Steel Pipe – located in abutments. Quantity of this suspect material located on the bridge structure is 85 linear feet.
7. 6-inch Nonperforated Helical Corrugated Steel Pipe – located in abutments. Quantity of this suspect material located on the bridge structure is 17 linear feet.
8. 1/8-inch Preformed Bearing Pad – associated with bearings. Quantity of this suspect material located on the bridge structure is unknown.
9. 2 2-inch Conduits – located in parapets for lighting. Quantity of this suspect material located on the bridge structure is 5,320 linear feet.
10. 4-inch Conduct – located in parapets for lighting. Quantity of this suspect material located on the bridge structure is 110 linear feet.
11. Construction Joints – located in abutments, piers and superstructure. Quantity of this suspect material located on the bridge structure is unknown.

It should be noted that the drawings indicated that all telephone and electrical ducts for this bridge are located underground.

During the physical inspection of the bridge, HzW could not locate Item Nos. 1 thru 3, and 6 thru 11. Three (3) suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

1. Preformed Expansion Joint Filler – located in outer parapet wall. HzW sampled this suspect material (Sample Nos. 01 and 02) and no asbestos was identified in the samples collected. This material is similar to Item No. 5, above.
2. Preformed Expansion Joint Filler – located in inner parapet wall. HzW sampled this suspect material (Sample Nos. 03 and 04) and no asbestos was identified in the samples collected. This material is similar to Item No. 5, above.
3. 1-inch Preformed Expansion Joint Filler – located in abutments. HzW sampled this suspect material (Sample Nos. 05 and 06) and no asbestos was identified in the samples collected. This material is similar to Item No. 4, above.

Note: Electric lighting is located in both parapet walls. The wiring is located in a metal pipe with a polyvinyl chloride sleeve.

CUY – 10-16.85 – Carnegie Avenue Bridge over GCRTA

Based on a review of the construction plans dated February 24, 2000 (Pages 1-5), plans exhibiting various dates (Pages 14, 148-185), January 23, 1930 plans (Pages 18-21), and April 13, 1928 plans (Pages 1-19) for this bridge, nine (9) suspect ACMs were noted as being used during construction of the bridge. These suspect ACMs consisted of the following:

1. Ohio Bell Telephone Company Ducts – located in parapets. Quantity of this suspect material located on the bridge structure is unknown.
2. 12 4-inch CEI Electrical Ducts – located in north parapet. Quantity of this suspect material located on the bridge structure is estimated at 1,740 linear feet.
3. 20-inch PEHP Gas Line, 8-inch PE Gas Line, 6-inch Gas Line - located in the north parapet. Quantity of this suspect material located on the bridge structure is estimated at 435 linear feet.
4. 16 4-inch MELP Fibre Ducts – located in road deck adjacent to south parapet. Quantity of this suspect material located on the bridge structure is estimated at 2,320 linear feet.
5. 12-inch and 16-inch Water Lines – located in a vault-like structure underneath road decking. Quantity of this suspect material located on the bridge structure is estimated at 290 linear feet.
6. Hot Joint Sealer – associated with sidewalk details. Quantity of this suspect material located on the bridge structure is unknown.
7. Preformed Expansion Joint Filler (deflection joints shall either be ¼-inch gray sponge rubber or ¼-inch gray cellular polyvinyl chloride sponge – located in fencing parapet. Quantity of this suspect material located on the bridge structure is unknown.
8. Corrosion Control Covering for 132 K.V. Steel Transmission Lines. Quantity of this suspect material located on the bridge structure is unknown.
9. Construction Joints – located in abutments. Quantity of this suspect material located on the bridge structure is unknown.

During the physical inspection of the bridge, HzW could not locate Item Nos. 1 thru 6, 8, and 9, above. Two (2) suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

1. Preformed Expansion Joint Filler – located in parapet wall. HzW sampled this suspect material (Sample Nos. 01 and 02) and no asbestos was identified in the samples collected. This material is similar to Item No. 7, above.
2. Three (3), what appear to be, 12-inch lines located on the underside of the decking running the length of the bridge, were noted during the physical inspection. However, due to the height of the lines on the bridge, access to the lines could not be obtained to determine if they contain or are comprised of an asbestos-containing material. Hence, the lines are assumed to contain asbestos until tested and proven otherwise by PLM analysis. Quantity of this suspect material located on the bridge structure is estimated at 435 linear feet.

CUY – 77-15.97L – Interstate 77 Southbound Bridge over East 14th Street (Note: The construction plan review and physical inspection for this bridge encompassed two southbound lanes and one northbound lane all over East 14th Street)

Based on a review of the construction plans dated December 18, 1959 (Pages 1 thru 177B) for this bridge, eleven (11) suspect ACMs were noted as being used during construction of the bridge. These suspect ACMs consisted of the following:

1. Asbestos Wire (described as follows: asbestos applied to the conductor to form a continuous tube of asbestos fibers at least 40 mils thick, tightly compressed and impregnated with a flame, heat and moisture-proof compound, and an outer asbestos braid at least 45 mils thick) – located in lighting poles and brackets. Quantity of this suspect material located on the bridge structure is unknown.
2. Transite conduit – associated with concrete pull box for lighting and goes through abutments. Quantity of this suspect material located on the bridge structure is unknown.
3. 2-inch Asbestos Cement or Fiber Equivalent to Orangeburg Nocrete Conduit – located in parapets and retaining wall. Quantity of this suspect material located on the bridge structure is 605 linear feet.
4. 1-inch Gray Rubber Preformed Expansion Joint Filler – located in abutments and retaining walls. Quantity of this suspect material located on the bridge structure is 75 square feet.
5. 1-Way Duct, 4-inch – located in East abutment. Quantity of this suspect material located on the bridge structure is 69 linear feet.
6. Premolded Sealing Strip – located in abutments and retaining walls. Quantity of this suspect material located on the bridge structure is unknown.
7. ½-inch Bituminous Preformed Joint Filler – located in abutments. Quantity of this suspect material located on the bridge structure is unknown.
8. ¼-inch Preformed Gray Rubber Expansion Joint Filler – located in parapet joints. Quantity of this suspect material located on the bridge structure is unknown.
9. Poured Joint Sealer – associated with parapet junction box for lighting. Quantity of this suspect material located on the bridge structure is unknown.
10. Tar Paper – associated with 1-Way 4-inch Duct for lighting. Quantity of this suspect material located on the bridge structure is unknown.
11. Construction Joints – located in abutments, piers and superstructure. Quantity of this suspect material located on the bridge structure is unknown.

During the physical inspection of the bridge, HzW could not located Item Nos. 1, 2 and 4 thru 7, and 9 thru 11, above. Two (2) suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

1. Preformed Gray Rubber Expansion Joint Filler – located in parapet walls. HzW sampled this suspect material (Sample Nos. 01 thru 04) and no asbestos was identified in the samples collected. This suspect material is similar to Item No. 8, above.
2. Tar Coated Pipe Conduit – located at parapet walls. HzW sampled this suspect material (Sample Nos. 05 thru 08) and no asbestos was identified in the samples collected. This suspect material is similar to Orangeburg Nocrete Conduit outlined in Item No. 3, above.

The building materials identified during the construction plan review were considered suspect materials, based on the assumption that these materials are typically coated or comprised of an asbestos-containing material, physically contain an asbestos-containing material(s), or are identified by their description as an "asbestos" material.

RECOMMENDATIONS

Based on the findings from the asbestos survey of the subject bridges, the following recommendations are presented for consideration:

1. Notify any outside contractor(s), prior to them working on the subject bridges, of the presence of any building materials identified as containing asbestos or assumed to contain asbestos.

2. If renovation activities have the potential to disturb the identified ACMs or assumed ACMs, then a licensed asbestos abatement contractor should be contracted to remove these materials prior to them being disturbed.

3. Submit the Ohio Environmental Protection Agency (OEPA), "Notification of Demolition and Renovation" form to the OEPA ten (10) days prior to any renovations activities which will involve the disturbance of 160 square feet or 260 linear feet of regulated asbestos-containing material (RACM) and ten (10) days prior to any demolition activities. Demolition is defined as the wrecking or taking out of any load-supporting structural member at a bridge. HzW has completed a copy of the OEPA's "Notification of Demolition and Renovation" form for each of the subject bridges. A copy of each of the completed forms is included as **Attachment 3.**

   It should be noted for the purpose of completing the notification, that building materials described as joint filler, sealing strip, construction joint, tar paper, corrugated steel pipe, joint sealer, gas or water lines, control covering and asbestos wire were categorized under Section VII of the OEPA Notification of Demolition and Renovation form as Nonfriable Asbestos Material NOT TO BE REMOVED – Category I. Building materials described as conduits, ducts, and bearing pad were categorized under Section VII as RACM.

4. If renovation and/or demolition activities are to occur at the subject bridges, submit the ODH "Prior Notification of Asbestos Hazard Abatement Project" form to the ODH ten (10) days prior to any asbestos hazard abatement activity being performed. ODH defines an asbestos hazard abatement activity as any activity involving the removal, renovation, enclosure, repair or encapsulation of reasonably related friable ACMs in an amount greater than fifty linear feet or fifty square feet.

5. As indicated in the OEPA "Notification of Demolition and Renovation" form, Section XVII, ensure that an individual trained in the provisions of the National Emissions Standard for Hazardous Air Pollutants (NESHAP) is on site during any renovation or demolition activities performed at the subject bridges. This individual should be certified by the Ohio Department of Health as an Asbestos Hazard Evaluation Specialist.

6. If the building materials identified as containing asbestos or assumed to contain asbestos are to remain in place, implement an operations and maintenance (O&M) program whereby these materials are continually evaluated and maintained by trained personnel.

HzW appreciates the opportunity you have given us to provide professional services to the Ohio Department of Transportation, District 12. Should you have any questions regarding the information presented in this letter report, please do not hesitate to contact us.

Sincerely,

HzW ENVIRONMENTAL CONSULTANTS, LLC

Matthew P. Fergus
Certified Asbestos Hazard Evaluation Specialist (ODH Licensed No. ES33228)

Joan A. Sablar
Senior Industrial Hygienist

JAS:jas\H10002-06
Attachments
I:\2010\H10002-06\District12Bridges_3Bridges_Rpt.doc

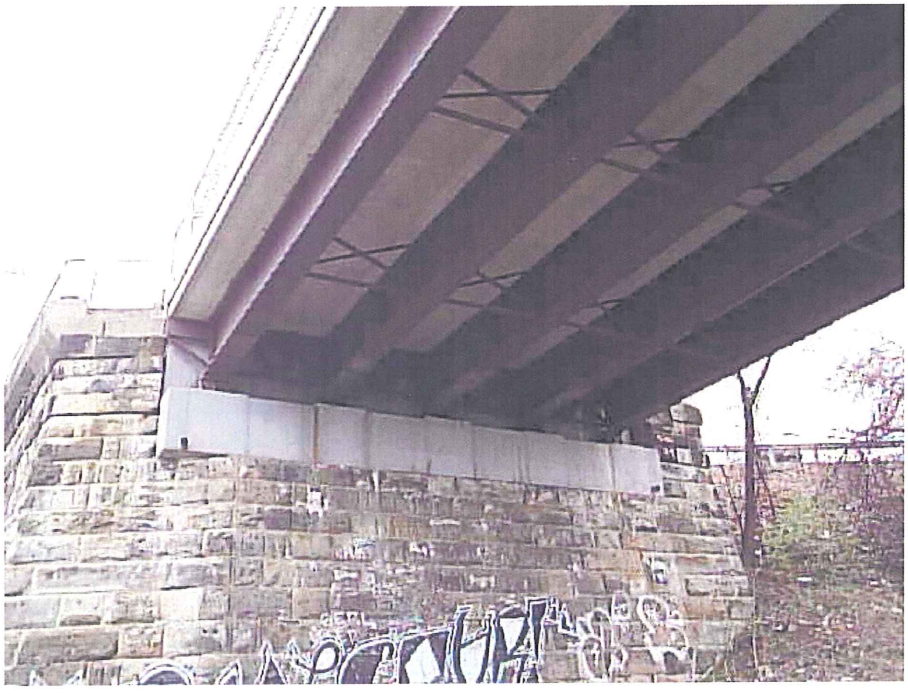
ATTACHMENT 1

PHOTOGRAPHIC LOG

Photograph 01
View Looking East at the Top of the
Abbey Avenue Bridge over the CSX Railroad

Photograph 02
View Looking West at the Underside of the
Abbey Avenue Bridge over the CSX Railroad

Photograph 03
View Looking West at the Top of the
Abbey Avenue Bridge over the CSX Railroad



Photograph 04
View Looking East at the Underside of the
Abbey Avenue Bridge over the CSX Railroad

Photograph 05
View Looking East at the Top of the
Carnegie Avenue Bridge over GCRTA (CUY-10-16.85)

Photograph 06
View Looking West at the Top of the
Carnegie Avenue Bridge over GCRTA (CUY-10-16.85)

HzW Environmental

Photograph 07
View Looking West at the Underside of the
Carnegie Avenue Bridge over GCRTA (CUY-10-16.85)

Photograph 08
View Looking East at the Underside of the
Carnegie Avenue Bridge over GCRTA (CUY-10-16.85)

Photograph 09
View Looking South at the Top of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

Photograph 10
View Looking South at the Top of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

Photograph 11
View of the Underside of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

Photograph 12
View of the Underside of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

Photograph 13
View of the Underside of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

Photograph 14
View of the Underside of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

Photograph 15
View Looking North at the Top of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

Photograph 16
View Looking North at the Top of the
Interstate 77 Bridge over East 14th Street (CUY-77-15.97L)

ATTACHMENT 2

LABORATORY ANALYTICAL REPORTS

iATL INTERNATIONAL
Asbestos Testing Laboratories

9000 Commerce Parkway
Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Chain of Custody / Sample Log
Bulk Asbestos

Client: HzW Environmental Consultants. LLC
6105 Heisley Road
Mentor, Ohio 44060

Project Name: ODOT - Abbey Rd. over CSX
Project No.: H10002 - 06

Office Phone: 440-357-1260
Cell Phone:
FAX / Email 1: 440-357-1510

Contact 1: Joan Sablar
Contact 2:
FAX / Email 2 JSablar@hzwenv.com

Special Instructions: PO # 5318 - 10

Matrix:

- [ ] Air
- [ ] Water
- [ ] Soil
- [ ] Paint
- [x] Bulk
- [ ] Surface Dust / Wipe
- [ ] Other _____

Analysis Method:

- [x] PLM : Bulk Asbestos Building Materials EPA 600 / R 93-116

- [ ] PLM : Point Counting
  - [ ] PC : via ELAP 198.1
  - [ ] PC : 400 Points
  - [ ] PC : 800 Points *
  - [ ] PC : other _____ Points *
- [ ] PLM : Gravimetric Reduction
  - [ ] PLM : NOB via 198.6
  - [ ] PLM : Friable via EPA 600 2.3
  - [ ] If <1% by PLM, to TEM via 198.4 *
  - [ ] If <1% by PLM, Hold for Instructions
- [ ] PLM : Analyze Until Positive (Positive Stop)
  - [ ] AUP : by Homogenous Area as Noted
  - [ ] AUP : by Material Type as Noted
- [ ] PLM : Non-Building Material *, **(Dust, Wipe, Tape, Soil)
  - [ ] Soil or Vermiculite Analysis *, **
- [ ] PLM: Instructions for Multi-Layered Samples
  - [ ] Analyze and Report All Separable Layers per EPA 600
  - [ ] Report Composite for Drywall Systems per NESHAP
  - [ ] Report All Layers and Composite Where Applicable
  - [ ] Only Analyze and Report Specifically Noted Layer

* Additional charge and turnaround may be required. ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory.

Turnaround Time:

Preliminary Results Requested By... _____ ☐ Verbals ☐ FAX ☐ Email
date / time

- [ ] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [x] 1 Day*
- [ ] 12 Hour**
- [ ] 6 Hour**
- [ ] RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. Please notify the lab before shipping.

Sample Numbers:

Client #(s): 01 (start) - 06 (end) iATL#(s): _____ (start) - _____ (end) Total: _____

Please use your sample log to supply sampling information (ex. Volumes, areas, descriptions, locations, etc.) or download forms at iatl.com

Chain of Custody:

Relinquished (Name / Organization):	JW	Date: 5-7-10	Time: 4pm
Received (Name / iATL):		Date:	Time:
Sample Login (Name / iATL):		Date:	Time:
Sample Prep (Name / iATL):		Date:	Time:
Analysis(Name(s) / iATL):		Date:	Time:
QA/QC Review (Name / iATL):		Date:	Time:
Archived / Released:	QA/QC InterLAB Use:	Date:	Time:

iATL INTERNATIONAL
ASBESTOS TESTING LABORATORIES

Chain of Custody / Sample Log
Bulk Asbestos

9000 Commerce Parkway
Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Client: HzW Environmental Consultants, LLC
6105 Heisley Road Mentor, Oh 44060

Project Name: ODOT - Abbey Rd over CSX
Project No.: H1002-06

Client Sample ID:	iATL Sample ID:	Sample Description / Location	Notes
01		Parapet wall expansion gasket - Inner	
02		"	
03		Parapet wall expansion gasket - Outer	
04		"	
05		Expansion Material at abutments	
06		"	

Please Make Additional Copies As Needed

eMail to: iATL

IATL International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: HZW Environmental Consultants
6105 Heisley Rd.
Mentor OH 44060

Report Date: 4/8/2010
Project: ODOT - Abbey Rd Over CSX
Project No.: H10002-06

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 3920093 **Description / Location:** Grey Gasket
Client No.: 01 Parapet Wall Expansion - Inner

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No.: 3920094 **Description / Location:** Grey Gasket
Client No.: 02 Parapet Wall Expansion - Inner

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No.: 3920095 **Description / Location:** Grey Gasket
Client No.: 03 Parapet Wall Expansion - Outer

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No.: 3920096 **Description / Location:** Grey Gasket
Client No.: 04 Parapet Wall Expansion - Outer

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 101165-0 **NY-DOH No. 11021** **AIHA Lab No. 100188**

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: E. Smith

Approved By:

Date: 4/8/2010

Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: HZW Environmental Consultants
6105 Heisley Rd.
Mentor OH 44060

Report Date: 4/8/2010
Project: ODOT - Abbey Rd Over CSX
Project No.: HI0002-06

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 3920097 **Description / Location:** Black Fibrous
Client No.: 05 Expansion Material At Abutments

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	100	Cellulose	None Detected

Lab No.: 3920098 **Description / Location:** Black Fibrous
Client No.: 06 Expansion Material At Abutments

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	100	Cellulose	None Detected

NIST-NVLAP No. 101165-0 **NY-DOH No. 11021** **AIHA Lab No. 100188**

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC–Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: E. Smith

Date: 4/8/2010

iATL INTERNATIONAL
Asbestos Testing Laboratories

9000 Commerce Parkway
Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Chain of Custody / Sample Log
Bulk Asbestos

Client: HzW Environmental Consultants, LLC
6105 Heisley Road
Mentor, Ohio 44060

Project Name: ODOT - Abbey Rd. over CSX
Project No.: H10002-06

Office Phone: 440-357-1260
Cell Phone:
FAX / Email 1: 440-357-1510

Contact 1: Joan Sablar
Contact 2:
FAX / Email 2 JSablar@hzwenv.com

Special Instructions: PO # 5318-10

Matrix:

- [ ] Air
- [ ] Water
- [ ] Soil
- [ ] Paint
- [x] Bulk
- [ ] Surface Dust / Wipe
- [ ] Other _____

Analysis Method:

- [x] PLM : Bulk Asbestos Building Materials EPA 600 / R 93-116
- [ ] PLM : Point Counting
  - [ ] PC : via ELAP 198.1
  - [ ] PC : 400 Points
  - [ ] PC : 800 Points *
  - [ ] PC : other _____ Points *
- [ ] PLM : Gravimetric Reduction
  - [ ] PLM : NOB via 198.6
  - [ ] PLM : Friable via EPA 600 2.3
  - [ ] If <1% by PLM, to TEM via 198.4 *
  - [ ] If <1% by PLM, Hold for Instructions
- [ ] PLM : Analyze Until Positive (Positive Stop)
  - [ ] AUP : by Homogenous Area as Noted
  - [ ] AUP : by Material Type as Noted
- [ ] PLM : Non-Building Material *, **(Dust, Wipe, Tape, Soil)
  - [ ] Soil or Vermiculite Analysis *, **
- [ ] PLM: Instructions for Multi-Layered Samples
  - [ ] Analyze and Report All Separable Layers per EPA 600
  - [ ] Report Composite for Drywall Systems per NESHAP
  - [ ] Report All Layers and Composite Where Applicable
  - [ ] Only Analyze and Report Specifically Noted Layer

* Additional charge and turnaround may be required. ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory.

Turnaround Time: Preliminary Results Requested By... _____ (date / time) ☐ Verbals ☐ FAX ☐ Email

☐ 10 Day ☐ 5 Day ☐ 3 Day ☐ 2 Day ☒ 1 Day* ☐ 12 Hour** ☐ 6 Hour** ☐ RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. Please notify the lab before shipping.

Sample Numbers:
Client #(s): 01 (start) - 06 (end) iATL#(s): _____ (start) - _____ (end) Total: _____
Please use your sample log to supply sampling information (ex: Volumes, areas, descriptions, locations, etc.) or download forms at iatl.com

Chain of Custody:

Relinquished (Name / Organization):	JW	Date: 5-7-10	Time: 4pm
Received (Name / iATL):		Date:	Time:
Sample Login (Name / iATL):		Date:	Time:
Sample Prep (Name / iATL):		Date:	Time:
Analysis(Name(s) / iATL):		Date:	Time:
QA/QC Review (Name / iATL):		Date:	Time:
Archived / Released:	QA/QC InterLAB Use:	Date:	Time:

RECEIVED APR - 8 2010

iATL INTERNATIONAL
Asbestos Testing Laboratories

9000 Commerce Parkway
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Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Chain of Custody / Sample Log
Bulk Asbestos

Client: HzW Environmental Consultants, LLC
6105 Heisley Road Mentor, Oh 44060

Project Name: ODOT - Abbey Rd over CSX
Project No.: H1002-06

Client Sample ID:	iATL Sample ID:	Sample Description / Location	Notes
01	3920093	Parapet wall expansion gasket - Inner	
02	3920094	"	
03	3920095	Parapet wall expansion gasket - Outer	
04	3920096	"	
05	3920097	Expansion Material at abutments	
06	3920098	"	

Please Make Additional Copies As Needed

Email to iATL

iATL INTERNATIONAL
Asbestos Testing Laboratories

Chain of Custody / Sample Log
Bulk Asbestos

9000 Commerce Parkway
Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Client: HzW Environmental Consultants, LLC
6105 Heisley Road Mentor, Oh 44060

Project Name: ODOT- Carnegie over GCRTA
Project No.: H10002-06

Client Sample ID:	iATL Sample ID:	Sample Description / Location	Notes
01		Expansion Material in parapet	
02		"	

Please Make Additional Copies As Needed

eMail to: iATL

iATL INTERNATIONAL
Asbestos Testing Laboratories

Chain of Custody / Sample Log
Bulk Asbestos

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Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Client: HzW Environmental Consultants. LLC
6105 Heisley Road
Mentor, Ohio 44060

Project Name: ODOT - Carnegie over GCRTA
Project No.: H10002 - 06

Office Phone: 440-357-1260
Cell Phone:
FAX / Email 1: 440-357-1510

Contact 1: Joan Sablar
Contact 2:
FAX / Email 2 JSablar@hzwenv.com

Special Instructions: PO # 5318 - 10

Matrix:

- [ ] Air
- [ ] Water
- [ ] Soil
- [ ] Paint
- [x] Bulk
- [ ] Surface Dust / Wipe
- [ ] Other _____

Analysis Method:

- [x] PLM : Bulk Asbestos Building Materials EPA 600 / R 93-116

- [ ] PLM : Point Counting
  - [ ] PC : via ELAP 198.1
  - [ ] PC : 400 Points
  - [ ] PC : 800 Points *
  - [ ] PC : other _____ Points *
- [ ] PLM : Gravimetric Reduction
  - [ ] PLM : NOB via 198.6
  - [ ] PLM : Friable via EPA 600 2.3
  - [ ] If <1% by PLM, to TEM via 198.4 *
  - [ ] If <1% by PLM, Hold for Instructions
- [ ] PLM : Analyze Until Positive (Positive Stop)
  - [ ] AUP : by Homogenous Area as Noted
  - [ ] AUP : by Material Type as Noted
- [ ] PLM : Non-Building Material *, **(Dust, Wipe, Tape, Soil)
  - [ ] Soil or Vermiculite Analysis *, **
- [ ] PLM: Instructions for Multi-Layered Samples
  - [ ] Analyze and Report All Separable Layers per EPA 600
  - [ ] Report Composite for Drywall Systems per NESHAP
  - [ ] Report All Layers and Composite Where Applicable
  - [ ] Only Analyze and Report Specifically Noted Layer

* Additional charge and turnaround may be required. ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory.

Turnaround Time:

Preliminary Results Requested By... _____ ☐ Verbals ☐ FAX ☐ Email
date / time

☐ 10 Day ☐ 5 Day ☐ 3 Day ☐ 2 Day ☒ 1 Day* ☐ 12 Hour** ☐ 6 Hour** ☐ RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. Please notify the lab before shipping.

Sample Numbers:

Client #(s): 01 (start) - 02 (end) iATL#(s): _____ (start) - _____ (end) Total: _____

Please use your sample log to supply sampling information (ex. Volumes, areas, descriptions, locations, etc.) or download forms at iatl.com

Chain of Custody:

Relinquished (Name / Organization):	JW	Date: 5-7-10	Time: 4pm
Received (Name / iATL):		Date:	Time:
Sample Login (Name / iATL):		Date:	Time:
Sample Prep (Name / iATL):		Date:	Time:
Analysis(Name(s) / iATL):		Date:	Time:
QA/QC Review (Name / iATL):		Date:	Time:
Archived / Released:	QA/QC InterLAB Use:	Date:	Time:

IATL International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: HZW Environmental Consultants
6105 Heisley Rd.
Mentor OH 44060

Report Date: 4/8/2010
Project: ODOT Carnegie Over GCRTA
Project No.: H10002-06

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 3920107
Client No.: 01
Description / Location: Grey Non Fibrous Expansion Material In Parapet

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No.: 3920108
Client No.: 02
Description / Location: Grey Non Fibrous Expansion Material In Parapet

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 101165-0 **NY-DOH No. 11021** **AIHA Lab No. 100188**

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: E. Smith

Approved By:

Date: 4/8/2010

Frank E. Ehrenfeld, III
Laboratory Director

Chain of Custody / Sample Log
Bulk Asbestos

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Asbestos Testing Laboratories

9000 Commerce Parkway
Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Client: HzW Environmental Consultants, LLC
6105 Heisley Road
Mentor, Ohio 44060

Project Name: ODOT - Carnegie over GCRTA
Project No.: H10002-06

Office Phone: 440-357-1260
Cell Phone:
FAX / Email 1: 440-357-1510

Contact 1: Joan Sablar
Contact 2:
FAX / Email 2 JSablar@hzwenv.com

Special Instructions: PO # 5318-10

Matrix:

- [ ] Air
- [ ] Water
- [ ] Soil
- [ ] Paint
- [x] Bulk
- [ ] Surface Dust / Wipe
- [ ] Other

Analysis Method:

- [x] PLM : Bulk Asbestos Building Materials EPA 600 / R 93-116
- [ ] PLM : Point Counting
  - [ ] PC : via ELAP 198.1
  - [ ] PC : 400 Points
  - [ ] PC : 800 Points *
  - [ ] PC : other _____ Points *
- [ ] PLM : Gravimetric Reduction
  - [ ] PLM : NOB via 198.6
  - [ ] PLM : Friable via EPA 600 2.3
  - [ ] If <1% by PLM, to TEM via 198.4 *
  - [ ] If <1% by PLM, Hold for Instructions
- [ ] PLM : Analyze Until Positive (Positive Stop)
  - [ ] AUP : by Homogenous Area as Noted
  - [ ] AUP : by Material Type as Noted
- [ ] PLM : Non-Building Material *, **(Dust, Wipe, Tape, Soil)
  - [ ] Soil or Vermiculite Analysis *, **
- [ ] PLM: Instructions for Multi-Layered Samples
  - [ ] Analyze and Report All Separable Layers per EPA 600
  - [ ] Report Composite for Drywall Systems per NESHAP
  - [ ] Report All Layers and Composite Where Applicable
  - [ ] Only Analyze and Report Specifically Noted Layer

* Additional charge and turnaround may be required. ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory.

Turnaround Time: Preliminary Results Requested By... _____ (date / time) ☐ Verbals ☐ FAX ☐ Email

- [ ] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [x] 1 Day*
- [ ] 12 Hour**
- [ ] 6 Hour**
- [ ] RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. Please notify the lab before shipping.

Sample Numbers:
Client #(s): 01 (start) - 02 (end) iATL#(s): _____ (start) - _____ (end) Total: _____
Please use your sample log to supply sampling information (ex. Volumes, areas, descriptions, locations, etc.) or download forms at iatl.com

Chain of Custody:

Relinquished (Name / Organization):	JW	Date: 5/7/10	Time: 4pm
Received (Name / iATL):		Date:	Time:
Sample Login (Name / iATL):	JM 4/8/10	Date:	Time:
Sample Prep (Name / iATL):		Date: APR - 8 2010	Time:
Analysis(Name(s) / iATL):		Date:	Time:
QA/QC Review (Name / iATL):		Date:	Time:
Archived / Released:	QA/QC InterLAB Use:	Date:	Time:

iATL INTERNATIONAL
Asbestos Testing Laboratories

Chain of Custody / Sample Log
Bulk Asbestos

9000 Commerce Parkway
Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Client: HzW Environmental Consultants, LLC
6105 Heisley Road Mentor, Oh 44060

Project Name: ODOT- Carnegie over GCRTA
Project No.: HIO 002 -06

Client Sample ID:	iATL Sample ID:	Sample Description / Location	Notes
01	3920107	Expansion Material in parapet	
02	3920108	"	

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Mail to: iATL

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Asbestos Testing Laboratories

Chain of Custody / Sample Log
Bulk Asbestos

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Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Client: HzW Environmental Consultants. LLC
6105 Heisley Road
Mentor, Ohio 44060

Project Name: ODOT - I77 over E. 14th St
Project No.: H10002-06

Office Phone: 440-357-1260
Cell Phone:
FAX / Email 1: 440-357-1510

Contact 1: Joan Sablar
Contact 2:
FAX / Email 2 JSablar@hzwenv.com

Special Instructions: PO # 5318-10

Matrix:

- ☐ Air
- ☐ Water
- ☐ Soil
- ☐ Paint
- ☒ Bulk
- ☐ Surface Dust / Wipe
- ☐ Other

Analysis Method:

☒ PLM : Bulk Asbestos Building Materials EPA 600 / R 93-116

☐ PLM : Point Counting
- ☐ PC : via ELAP 198.1
- ☐ PC : 400 Points
- ☐ PC : 800 Points *
- ☐ PC : other _____ Points *

☐ PLM : Gravimetric Reduction
- ☐ PLM : NOB via 198.6
- ☐ PLM : Friable via EPA 600 2.3
- ☐ If <1% by PLM, to TEM via 198.4 *
- ☐ If <1% by PLM, Hold for Instructions

☐ PLM : Analyze Until Positive (Positive Stop)
- ☐ AUP : by Homogenous Area as Noted
- ☐ AUP : by Material Type as Noted

☐ PLM : Non-Building Material *, **(Dust, Wipe, Tape, Soil)
- ☐ Soil or Vermiculite Analysis *, **

☐ PLM: Instructions for Multi-Layered Samples
- ☐ Analyze and Report All Separable Layers per EPA 600
- ☐ Report Composite for Drywall Systems per NESHAP
- ☐ Report All Layers and Composite Where Applicable
- ☐ Only Analyze and Report Specifically Noted Layer

* Additional charge and turnaround may be required. ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory.

Turnaround Time:

Preliminary Results Requested By... _____ ☐ Verbals ☐ FAX ☐ Email
date / time

☐ 10 Day ☐ 5 Day ☐ 3 Day ☐ 2 Day ☒ 1 Day* ☐ 12 Hour** ☐ 6 Hour** ☐ RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. Please notify the lab before shipping.

Sample Numbers:

Client #(s): 01 (start) - 08 (end)
iATL#(s): _____ (start) - _____ (end) Total: _____

Please use your sample log to supply sampling information (ex. Volumes, areas, descriptions, locations, etc.) or download forms at iatl.com

Chain of Custody:

Relinquished (Name / Organization):	JW	Date: 5-7-10	Time: 4pm
Received (Name / iATL):		Date:	Time:
Sample Login (Name / iATL):		Date:	Time:
Sample Prep (Name / iATL):		Date:	Time:
Analysis(Name(s) / iATL):		Date:	Time:
QA/QC Review (Name / iATL):		Date:	Time:
Archived / Released:	QA/QC InterLAB Use:	Date:	Time:

iATL INTERNATIONAL
Asbestos Testing Laboratories

Chain of Custody / Sample Log
Bulk Asbestos

9000 Commerce Parkway
Suite B
Mt. Laurel, NJ 08054
Toll Free: 877 428-4285
info@iatl.com
www.iatl.com

Client: HzW Environmental Consultants, LLC
6105 Heisley Road Mentor, Oh 44060

Project Name: ODOT - I77 over E. 14th St.
Project No.: H10002-06

Client Sample ID:	iATL Sample ID:	Sample Description / Location	Notes
01		Expansion Material in parapet Wall	
02		"	
03		"	
04		"	
05		Tar paper Pipe Wrap	
06		"	
07		"	
08		"	

Please Make Additional Copies As Needed

eMail to: iATL

IATL International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: HZW Environmental Consultants
6105 Heisley Rd.
Mentor OH 44060

Report Date: 4/8/2010
Project: ODOT - I77 Over E 14th St
Project No.: H10002-06

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 3920099 **Description / Location:** Tan Wall
Client No.: 01 Expansion Material In Parapet Wall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No.: 3920100 **Description / Location:** Tan Wall
Client No.: 02 Expansion Material In Parapet Wall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No.: 3920101 **Description / Location:** Tan Wall
Client No.: 03 Expansion Material In Parapet Wall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

Lab No.: 3920102 **Description / Location:** Tan Wall
Client No.: 04 Expansion Material In Parapet Wall

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100

NIST-NVLAP No. 101165-0 **NY-DOH No. 11021** **AIHA Lab No. 100188**

This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any agency of the U.S. government
This report shall not be reproduced except in full, without written approval of the laboratory.

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method, (PC-Trace) represents this limit of quantitation, (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: E. Smith

Approved By:

Date: 4/8/2010

Frank E. Ehrenfeld, III
Laboratory Director

IATL International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054
Telephone: 856-231-9449 Fax: 856-231-9818

CERTIFICATE OF ANALYSIS

Client: HZW Environmental Consultants
6105 Heisley Rd.
Mentor OH 44060

Report Date: 4/8/2010
Project: ODOT - I77 Over E 14th St
Project No.: H10002-06

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 3920103 **Description / Location:** Black Tar Paper
Client No.: 05 Pipe Wrap

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	80	Cellulose	20

Lab No.: 3920104 **Description / Location:** Black Tar Paper
Client No.: 06 Pipe Wrap

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	30	Cellulose	70

Lab No.: 3920105 **Description / Location:** Black Tar Paper
Client No.: 07 Pipe Wrap

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	30	Cellulose	70

Lab No.: 3920106 **Description / Location:** Black Tar Paper
Client No.: 08 Pipe Wrap

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	30	Cellulose	70

NIST-NVLAP No. 101165-0 **NY-DOH No. 11021** **AIHA Lab No. 100188**

Analysis Method: EPA 600/R-93/116

Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: E. Smith

Date: 4/8/2010

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Chain of Custody / Sample Log
Bulk Asbestos

Client: HzW Environmental Consultants, LLC
6105 Heisley Road
Mentor, Ohio 44060

Project Name: ODOT - I77 over E. 14th St
Project No.: H10002 - 06

Office Phone: 440-357-1260
Cell Phone:
FAX / Email 1: 440-357-1510

Contact 1: Joan Sablar
Contact 2:
FAX / Email 2 JSablar@hzwenv.com

Special Instructions: PO # 5318 - 10

Matrix:

- [ ] Air
- [ ] Water
- [ ] Soil
- [ ] Paint
- [x] Bulk
- [ ] Surface Dust / Wipe
- [ ] Other

Analysis Method:

- [x] PLM : Bulk Asbestos Building Materials EPA 600 / R 93-116
- [ ] PLM : Point Counting
  - [ ] PC : via ELAP 198.1
  - [ ] PC : 400 Points
  - [ ] PC : 800 Points *
  - [ ] PC : other _____ Points *
- [ ] PLM : Gravimetric Reduction
  - [ ] PLM : NOB via 198.6
  - [ ] PLM : Friable via EPA 600 2.3
  - [ ] If <1% by PLM, to TEM via 198.4 *
  - [ ] If <1% by PLM, Hold for Instructions
- [ ] PLM : Analyze Until Positive (Positive Stop)
  - [ ] AUP : by Homogenous Area as Noted
  - [ ] AUP : by Material Type as Noted
- [ ] PLM : Non-Building Material *, **(Dust, Wipe, Tape, Soil)
  - [ ] Soil or Vermiculite Analysis *, **
- [ ] PLM: Instructions for Multi-Layered Samples
  - [ ] Analyze and Report All Separable Layers per EPA 600
  - [ ] Report Composite for Drywall Systems per NESHAP
  - [ ] Report All Layers and Composite Where Applicable
  - [ ] Only Analyze and Report Specifically Noted Layer

* Additional charge and turnaround may be required. ** Alternative Method (ex: EPA 600/R-04/004) may be recommended by Laboratory.

Turnaround Time: Preliminary Results Requested By... _____ (date / time) ☐ Verbals ☐ FAX ☐ Email

- [ ] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [x] 1 Day*
- [ ] 12 Hour**
- [ ] 6 Hour**
- [ ] RUSH**

* End of next business day unless otherwise specified. ** Matrix Dependent. Please notify the lab before shipping.

Sample Numbers:
Client #(s): 01 (start) - 08 (end) iATL#(s): _____ (start) - _____ (end) Total: _____
Please use your sample log to supply sampling information (ex. Volumes, areas, descriptions, locations, etc.) or download forms at iatl.com

Chain of Custody:

Relinquished (Name / Organization):	JW	Date: 5-7-10	Time: 4 pm
Received (Name / iATL):		Date:	Time:
Sample Login (Name / iATL):		Date:	Time:
Sample Prep (Name / iATL):		Date:	Time:
Analysis(Name(s) / iATL):		Date: 5/8/10	Time:
QA/QC Review (Name / iATL):		Date:	Time:
Archived / Released:	QA/QC InterLAB Use:	Date:	Time:

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ASBESTOS TESTING LABORATORIES

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info@iatl.com
www.iatl.com

Chain of Custody / Sample Log
Bulk Asbestos

Client: HzW Environmental Consultants, LLC
6105 Heisley Road Mentor, Oh 44060

Project Name: ODOT - I77 over E. 14th St.
Project No.: H10002-06

Client Sample ID:	iATL Sample ID:	Sample Description / Location	Notes
01	3920099	Expansion Material in parapet Wall	
02	3920100	"	
03	3920101	"	
04	3920102	"	
05	3920103	Tar paper Pipe Wrap	
06	3920104	"	
07	3920105	"	
08	3920106	"	

Please Make Additional Copies As Needed

Mail to iATL

ATTACHMENT 3

OHIO ENVIRONMENTAL PROTECTION AGENCY'S "NOTIFICATION OF DEMOLITION AND RENOVATION" FORMS

OHIO ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project #	Postmark	Date Received	Notification #

I. Type of Notification (check one): ☒ Original ☐ Revised ☐ Canceled

II. Facility Description (include building name, number and floor or room number)

Building Name: *Abbey Avenue Bridge over CSX*

Address: *Abbey Avenue Bridge over CSX*

City: *Cleveland* State: *OHIO* Zip Code: _____ County: *Cuyahoga*

Site Location (specific): *Abbey Avenue Bridge over CSX*

Building Size (square feet): *NA* # of Floors: *NA* Age in Years: *~50*

Present Use: *Bridge* Prior Use: *Bridge*

III. Type of Operation (check one): ☐ Demo ☐ Ordered Demo ☒ Renovation ☐ Emergency Renovation ☐ Fire Training

IV. Is Asbestos Present? (check one): ☒ Yes ☐ No

V. Facility Information

Owner Name: *Ohio Department of Transportation*

Address: *5500 Transportation Boulevard*

City: *Garfield Heights* State: *Ohio* Zip Code: *44125*

Contact: *Mr. Mark Alan Carpenter* Telephone: *216-584-2089* Fax: _____

Removal Contractor Name: _____ License # _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact: _____ Telephone: _____ Fax: _____

Other Operator (demolition/general): _____ License # _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact: _____ Telephone: _____ Fax: _____

VI. Procedure, including analytical methods, employed to detect the presence of and to estimate the quantity of RACM and Category I and Category II nonfriable ACM:

NESHAP Inspection Procedure

Ohio Asbestos Hazard Evaluation Specialist: *Matthew Fergus* (Name) *33228* (Certification #)

VII. Approximate Amount of Asbestos Materials:

		Nonfriable Asbestos Material to be Removed		Nonfriable Asbestos Material NOT to be Removed	
	RACM to Be Removed	Category I	Category II	Category I	Category II
Pipes (linear feet)	*5430*			*102*	
Surface Area (square feet)					
Facility Components (cubic feet)					

VIII. Scheduled Dates Demolition or Renovation: Start: _____ Complete: _____

IX. Dates for Asbestos Removal (MM/DD/YY) Start: _____ Complete: _____

Days of the Week:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Hours of Operation:							

Complete all unshaded spaces, except, demolitions which involve less than 260 linear feet, 160 square feet or 35 cubic feet of RACM, need not complete spaces VII, XI, XII, XIII, XIV, and XV. Notifications for Emergency Demolitions or Emergency Renovations must supply attachments.

OHIO ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF DEMOLITION AND RENOVATION

X. Description of planned Demolition or Renovation work to be performed and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components:

XI. Description of work practices and engineering controls to be used to comply with the requirements, including asbestos removal and waste handling emission control procedures:

XII. Waste Transporter #1

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

Waste Transporter #2

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

XIII. Waste Disposal

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

XIV. Emergency Demolition: (complete Item XIV and all other sections, only if this project is an Emergency Demolition)

1. Attach a copy of the Order to this notice.
2. Name of the Authority Issuing Order: _____ Title: _____
3. Authority of Order (Citation of Code): _____
4. Date of Order (MM/DD/YY): _____ Date Ordered to Begin: _____

XV. Emergency Renovation: (Attach separate sheet with the following information if project is Emergency Renovation)

1. Date and Hour of the Emergency
2. Description of the Sudden, Unexpected Event.
3. Explanation of how event caused unsafe conditions or equipment damage or an unreasonable financial burden.

XVI. Description of procedures to be followed in the event that unexpected RACM is found or nonfriable ACM becomes crumbled, pulverized or reduced to powder.

Determine if it is regulated under NESHAP, make proper notification if required, and take the appropriate actions. Contain the material and saturate with surfactant then take the appropriate actions.

XVII. I certify that an individual trained in the provisions of NESHAPS (40 CFR PART 61, SUBPART M) will be on-site during the Demolition or Renovation and evidence that the required training has been accomplished by this person will be available during normal business hours.

_____ _____ _____

Signature of Owner/Operator | Date | Type or Print Name and Title

XVIII. I acknowledge the existance of laws prohibiting the submission of false or misleading statements and I certify that facts contained in this notification are true, accurate and complete.

_____ _____ _____

Signature of Owner/Operator | Date | Type or Print Name and Title

Original Notification must be mailed or hand delivered at least ten working days (Monday-Friday excluding weekends) before demolition or renovation begins, except emergency demolitions and emergency renovations (see regulation) which must be submitted as soon as possible before operations begin. (Form Revised 11/12/97)

OHIO ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project #	Postmark	Date Received	Notification #

I. Type of Notification (check one): ☒ Original ☐ Revised ☐ Canceled

II. Facility Description (include building name, number and floor or room number)

Building Name: *Carnegie Avenue Bridge over GCRTA*

Address: *Carnegie Avenue Bridge over GCRTA*

City: *Cleveland* State: *OHIO* Zip Code: _____ County: *Cuyahoga*

Site Location (specific): *Carnegie Avenue Bridge over GCRTA*

Building Size (square feet): *NA* # of Floors: *NA* Age in Years: *~50*

Present Use: *Bridge* Prior Use: *Bridge*

III. Type of Operation (check one): ☐ Demo ☐ Ordered Demo ☒ Renovation ☐ Emergency Renovation ☐ Fire Training

IV. Is Asbestos Present? (check one): ☒ Yes ☐ No

V. Facility Information

Owner Name: *Ohio Department of Transportation*

Address: *5500 Transportation Boulevard*

City: *Garfield Heights* State: *Ohio* Zip Code: *44125*

Contact: *Mr. Mark Alan Carpenter* Telephone: *216-584-2089* Fax: _____

Removal Contractor Name: _____ License # _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact: _____ Telephone: _____ Fax: _____

Other Operator (demolition/general): _____ License # _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact: _____ Telephone: _____ Fax: _____

VI. Procedure, including analytical methods, employed to detect the presence of and to estimate the quantity of RACM and Category I and Category II nonfriable ACM:

NESHAP Inspection Procedure

Ohio Asbestos Hazard Evaluation Specialist: *Matthew Fergus* (Name) *33228* (Certification #)

VII. Approximate Amount of Asbestos Materials:

	RACM to Be Removed	Nonfriable Asbestos Material to be Removed		Nonfriable Asbestos Material NOT to be Removed	
		Category I	Category II	Category I	Category II
Pipes (linear feet)	*4060*			*1160*	
Surface Area (square feet)					
Facility Components (cubic feet)					

VIII. Scheduled Dates Demolition or Renovation: Start: _____ Complete: _____

IX. Dates for Asbestos Removal (MM/DD/YY) Start: _____ Complete: _____

Days of the Week:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Hours of Operation:							

Complete all unshaded spaces, except, demolitions which involve less than 260 linear feet, 160 square feet or 35 cubic feet of RACM, need not complete spaces VII, XI, XII, XIII, XIV, and XV. Notifications for Emergency Demolitions or Emergency Renovations must supply attachments.

OHIO ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF DEMOLITION AND RENOVATION

X. **Description of planned Demolition or Renovation work to be performed and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components:**

XI. **Description of work practices and engineering controls to be used to comply with the requirements, including asbestos removal and waste handling emission control procedures:**

XII. **Waste Transporter #1**

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

Waste Transporter #2

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

XIII. **Waste Disposal**

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

XIV. **Emergency Demolition**: (complete Item XIV and all other sections, only if this project is an Emergency Demolition)

1. Attach a copy of the Order to this notice.
2. Name of the Authority Issuing Order: _____ Title: _____
3. Authority of Order (Citation of Code): _____
4. Date of Order (MM/DD/YY): _____ Date Ordered to Begin: _____

XV. **Emergency Renovation**: (Attach separate sheet with the following information if project is Emergency Renovation)

1. Date and Hour of the Emergency
2. Description of the Sudden, Unexpected Event.
3. Explanation of how event caused unsafe conditions or equipment damage or an unreasonable financial burden.

XVI. **Description of procedures to be followed in the event that unexpected RACM is found or nonfriable ACM becomes crumbled, pulverized or reduced to powder.**

Determine if it is regulated under NESHAP, make proper notification if required, and take the appropriate actions. Contain the material and saturate with surfactant then take the appropriate actions.

XVII. **I certify that an individual trained in the provisions of NESHAPS (40 CFR PART 61, SUBPART M) will be on-site during the Demolition or Renovation and evidence that the required training has been accomplished by this person will be available during normal business hours.**

_____ _____ _____

Signature of Owner/Operator Date Type or Print Name and Title

XVIII. **I acknowledge the existance of laws prohibiting the submission of false or misleading statements and I certify that facts contained in this notification are true, accurate and complete.**

_____ _____ _____

Signature of Owner/Operator Date Type or Print Name and Title

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OHIO ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project #	Postmark	Date Received	Notification #

I. Type of Notification (check one): ☒ Original ☐ Revised ☐ Canceled

II. Facility Description (include building name, number and floor or room number)

Building Name: *Interstate 77 Southbound Bridge over East 14th Street*

Address: *Interstate 77 Southbound Bridge over East 14th Street*

City: *Cleveland* State: *OHIO* Zip Code: _____ County: *Cuyahoga*

Site Location (specific): *Interstate 77 Southbound Bridge over East 14th Street*

Building Size (square feet): *NA* # of Floors: *NA* Age in Years: *~50*

Present Use: *Bridge* Prior Use: *Bridge*

III. Type of Operation (check one): ☐ Demo ☐ Ordered Demo ☒ Renovation ☐ Emergency Renovation ☐ Fire Training

IV. Is Asbestos Present? (check one): ☒ Yes ☐ No

V. Facility Information

Owner Name: *Ohio Department of Transportation*

Address: *5500 Transportation Boulevard*

City: *Garfield Heights* State: *Ohio* Zip Code: *44125*

Contact: *Mr. Mark Alan Carpenter* Telephone: *216-584-2089* Fax: _____

Removal Contractor Name: _____ License # _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact: _____ Telephone: _____ Fax: _____

Other Operator (demolition/general): _____ License # _____

Address: _____

City: _____ State: _____ Zip Code: _____

Contact: _____ Telephone: _____ Fax: _____

VI. Procedure, including analytical methods, employed to detect the presence of and to estimate the quantity of RACM and Category I and Category II nonfriable ACM:

NESHAP Inspection Procedure

Ohio Asbestos Hazard Evaluation Specialist: *Matthew Fergus* (Name) *33228* (Certification #)

VII. Approximate Amount of Asbestos Materials:

	RACM to Be Removed	Nonfriable Asbestos Material to be Removed		Nonfriable Asbestos Material NOT to be Removed	
		Category I	Category II	Category I	Category II
Pipes (linear feet)	*69*				
Surface Area (square feet)				*75*	
Facility Components (cubic feet)					

VIII. Scheduled Dates Demolition or Renovation: Start: _____ Complete: _____

IX. Dates for Asbestos Removal (MM/DD/YY) Start: _____ Complete: _____

Days of the Week:	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Hours of Operation:							

Complete all unshaded spaces, except, demolitions which involve less than 260 linear feet, 160 square feet or 35 cubic feet of RACM, need not complete spaces VII, XI, XII, XIII, XIV, and XV. Notifications for Emergency Demolitions or Emergency Renovations must supply attachments.

OHIO ENVIRONMENTAL PROTECTION AGENCY
NOTIFICATION OF DEMOLITION AND RENOVATION

X. **Description of planned Demolition or Renovation work to be performed and method(s) to be employed, including demolition or renovation techniques to be used and description of affected facility components:**

XI. **Description of work practices and engineering controls to be used to comply with the requirements, including asbestos removal and waste handling emission control procedures:**

XII. **Waste Transporter #1**

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

Waste Transporter #2

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

XIII. **Waste Disposal**

Name: _____

Address: _____

City: _____ State: _____ Zip code: _____

Contact Person: _____ Telephone: _____ Fax: _____

XIV. **Emergency Demolition**: (complete Item XIV and all other sections, only if this project is an Emergency Demolition)

1. Attach a copy of the Order to this notice.
2. Name of the Authority Issuing Order: _____ Title: _____
3. Authority of Order (Citation of Code): _____
4. Date of Order (MM/DD/YY): _____ Date Ordered to Begin: _____

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1. Date and Hour of the Emergency
2. Description of the Sudden, Unexpected Event.
3. Explanation of how event caused unsafe conditions or equipment damage or an unreasonable financial burden.

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Signature of Owner/Operator Date Type or Print Name and Title

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