CUY-90-14.90

PID 77332/85531

APPENDIX EC-28

Asbestos Survey of Bridge 10
(Contract Document)

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

Innerbelt Bridge
Construction Contract Group 1 (CCG1)

Revision Date: June 23, 2010

7 - Addendum No. 7 - New Appendix

FINDINGS FROM AN ASBESTOS SURVEY

CUY–90-E-10 Bridge Ramp over East 14th Street

CUY-INNERBELT PROJECT AREA

[PID 77510 / Task Order #15885-8]

JUNE 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

June 23, 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 the CUY-90 E-10 Bridge Ramp 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 of the CUY-90 E-10 bridge ramp over East 14th Street for the Ohio Department of Transportation District 12, herein referred to as the "subject bridge". 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 subject bridge 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 subject bridge were located by a representative of ODOT and, therefore, were reviewed by HzW. A representative of HzW, certified by the Ohio Department of Health (ODH) as an Asbestos Hazard Evaluation Specialist, subsequently conducted a physical inspection of the subject bridge during May 2010 to visually identify and sample accessible suspect ACMs. A photographic log depicting the subject bridge was compiled during the physical inspection and is included as **Attachment 1**.

Based on the physical inspection conducted at the subject bridge, 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 the bridge and the analytical results for any bulk samples collected. A copy of the laboratory analytical report 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.

Based on a review of the construction plans dated March 9, 1960 (Pages 1 thru 181) 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. 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 Fiber or Asbestos Cement Conduit for Lighting Cables – in parapet and retaining walls of the bridge. Quantity of these suspect materials located on the bridge structure is estimated at 450 linear feet.
4. 2-inch Fiber Conduit for Lighting Cables – in concrete foundation from transfer pole base box of the bridge. Quantity of this suspect material located on the bridge structure is unknown.
5. ½-inch Bituminous Preformed Joint Filler – located in abutments. Quantity of this suspect material located on the bridge structure is unknown.
6. Poured Joint Sealer – associated with parapet junction box for lighting. Quantity of this suspect material located on the bridge structure is unknown.
7. 12-inch by ½-inch Premolded Sealing Strip – located in abutments and retaining walls. Quantity of this suspect material located on the bridge structure is estimated at 48 square feet.
8. ¾-inch Premoulded Expansion Joint Material – located in front of bumper block to within 2-inches of the surface of the bridge. Quantity of this suspect material located on the bridge structure is unknown
9. 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 subject bridge, HzW could not locate Items 1 - 9, above. Two (2) additional suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

1. Gasket Material underneath Guard Rail Mounts – located on parapet walls of bridge. HzW sampled this suspect material (Sample Nos. 01 thru 03) and no asbestos was identified in the samples collected.
2. Expansion Material – located in parapet walls of bridge. HzW sampled this suspect material (Sample Nos. 04 thru 06) and no asbestos was identified in the samples collected.

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 bridge, the following recommendations are presented for consideration:

1. Notify any outside contractor(s), prior to them working on the subject bridge, 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 the subject bridge. A copy of the completed form 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, joint sealer, joint material 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 were categorized under Section VII as RACM.

4. If renovation and/or demolition activities are to occur at the subject bridge, 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\js\H10002-06
Attachments
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ATTACHMENT 1

PHOTOGRAPHIC LOG

Photograph 01

View Looking West at the Top of the CUY-90 E-10 Ramp Bridge
over East 14th Street, Cleveland, Cuyahoga County, Ohio

Photograph 02

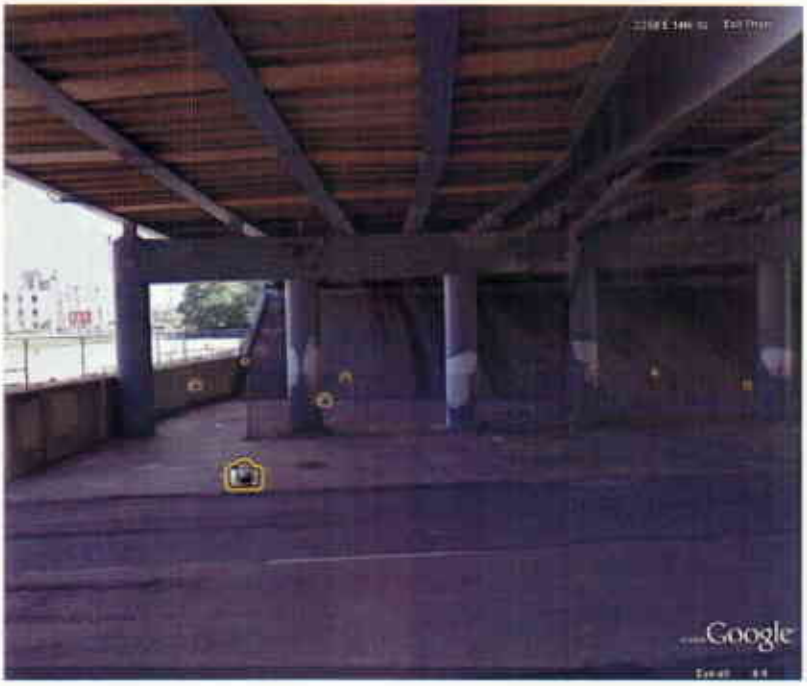
View Looking East at the Top of the CUY-90 E-10 Ramp Bridge
over East 14th Street, Cleveland, Cuyahoga County, Ohio

Photograph 03

View Looking South at the Northwest Side of the CUY-90 E-10 Ramp Bridge over East 14th Street, Cleveland, Cuyahoga County, Ohio

Photograph 04

View Looking South at the Northeast Side of the CUY-90 E-10 Ramp Bridge over East 14th Street, Cleveland, Cuyahoga County, Ohio



Photograph 05

View Looking East at the Underside of the East Side of the CUY-90 E-10 Ramp Bridge over East 14th Street, Cleveland, Cuyahoga County, Ohio

Photograph 06

View Looking West at the Underside of the West Side of the CUY-90 E-10 Ramp Bridge over East 14th Street, Cleveland, Cuyahoga County, Ohio

ATTACHMENT 2

LABORATORY ANALYTICAL REPORT

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: 5/25/2010
Project: ODOT 77 Ramp From 90W
Project No.:

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 3969022
Client No.: 01
Description / Location: Tan Gasket

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

Lab No.: 3969023
Client No.: 02
Description / Location: Tan Gasket

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

Lab No.: 3969024
Client No.: 03
Description / Location: Tan Gasket

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

Lab No.: 3969025
Client No.: 04
Description / Location: Grey Gasket

% Asbestos	Type	% Non-Asbestos Fibrous Material	Type	% Non-Fibrous Material
None Detected	None Detected	Trace	Cellulose	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: 5/25/2010

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: 5/25/2010
Project: ODOT 77 Ramp From 90W
Project No.:

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: 3969026
Client No.: 05
Description / Location: Grey Gasket

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

Lab No.: 3969027
Client No.: 06
Description / Location: Grey Gasket

% 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

Date: 5/25/2010

Chain of Custody / Sample Log
Bulk Asbestos

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

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

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

Project Name: ODOT 77 ramp from 90W
Project No.:

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

Special Instructions:

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... _____ (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): Brad Toney
Received (Name / iATL): _____
Sample Login (Name / iATL): _____
Sample Prep (Name / iATL): _____
Analysis(Name(s) / iATL): _____
QA/QC Review (Name / iATL): _____
Archived / Released: _____ QA/QC InterLAB Use: _____

MAY 25 2010

Date: 5-24-10 Time: 4:00
Date: _____ Time: _____
Date: _____ Time: _____
Date: _____ Time: _____
Date: 5/25/10 Time: 8:00
Date: _____ Time: _____
Date: _____ Time: _____

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

- Bulk Asbestos Sample Log –

Client: HzW

Project Name: ODOT 77 Ramp from 90W
Project No.:

Client Sample ID:	IATL Sample ID:	Sample Description / Location	Notes
01	3969022	Gasket material	
02	3969023	)	
03	3969024		
04	3969025	Gasket material	
05	3969026	)	
06	3969027		

Please Make Additional Copies As Needed