

CUY-90-14.90

PID 77332/85531

APPENDIX EC-10

Asbestos Survey of Bridges 1, 2, 3, 5, 7, 8, 9, 11 & 12 (Contract Document)

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

Innerbelt Bridge
Construction Contract Group 1 (CCG1)

Revision Date: May 20, 2010

FINDINGS FROM AN ASBESTOS SURVEY

Eleven (11) Bridges Associated with the CUY-Innerbelt CCGI Design ODOT PID 77332

JUNE 2009

Prepared for:

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

Prepared by:



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



June 15, 2009

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 Eleven (11) Bridges Associated with the CUY – Innerbelt CCGI Design for the Ohio Department of Transportation (ODOT) District 12 (HzW Project No. H09004-07)

Dear Mr. Carpenter:

In accordance with our letter agreement dated November 26, 2007, HzW Environmental Consultants, LLC (HzW) conducted an asbestos survey at eleven (11) bridges associated with the CUY – Innerbelt CCGI Design for the Ohio Department of Transportation District 12. The eleven (11) bridges consisted of the following:

- 1. CUY-90-1463R (SFN 1809148) Ramp WN under I-71 Mainline Bridge
- 2. CUY-90-1490L (SFN 1809342) Over Starkweather Avenue
- 3. CUY-90-1490R (SFN 1807625) Over Starkweather Avenue
- 4. CUY-90-1506 (SFN 1807684) Over Kenilworth Avenue
- CUY-90-15.24 (SFN 1809393) Innerbelt Bridge over Cuyahoga River
- CUY-90-1628EW (SFN 1807552) Center Bridge over East 9th Street
- CUY-90-1628L (SFN 1807498) Northern most Bridge over East 9th Street
- CUY-90-1628R (SFN 1807714) Southern most Bridge over East 9th Street
- 9. CUY-90-1640 (SFN 1807773) Over Ramps E-10 and E-8
- 10. CUY-90-1651L (SFN 1807900) Over East 14th Street
- 11 CUY-90-1651R (SFN 1807803) 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 all of 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 May and June 2009 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 EMSL Analytical, Inc. of Westmont, New Jersey, for analysis of asbestos content by Polarized Light Microscopy (PLM) using the Environmental Protection Agency (EPA) Method 600/R-93/116.

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 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-90-1463R (SFN 1809148) Ramp WN under I-71 Mainline Bridge

Based on a review of the construction plans dated April 8, 1965 (Pages 1 thru 504) for this bridge, ten (10) suspect ACMs were noted as being used during construction of the bridge. These suspect ACMs consisted of the following:

- 1. ¼-inch by 4-inch Expansion Joint Material located on superstructure. Quantity of this suspect material located on the bridge structure is unknown.
- 2. ½-inch Preformed Expansion Joint Filler where pull box is in contact with other concrete. Quantity of this suspect material located on the bridge structure is unknown.
- 3. Type I Fiber Ducts or Galvanized Steel Conduit for Foundation Conduit Bends associated with Lighting. Quantity of this suspect material located on the bridge structure is unknown.
- 4. ½-inch Preforated Expansion Joint Filler located in abutments. Quantity of this suspect material located on the bridge structure is 81 square feet.
- 5. 6-inch Perforated Helical Corrugated Metal Pipe (CMP) located in abutments. Quantity of this suspect material located on the bridge structure is 164 linear feet.
- 6. 6-inch Non-Perforated Helical CMP located in abutments. Quantity of this suspect material located on the bridge structure is 119 square feet.
- 7. 12-inch by ½-inch Premolded Sealing Strip located at top of footing to bottom of approach slab or to 6-inches below median of the bridge. Quantity of this suspect material located on the bridge structure is 31 linear feet.
- 8. Construction Joints located in abutments, wing walls, piers and deck. Quantity of this suspect material located on the bridge structure is unknown.
- 9. 1/8-inch Sheet Asbestos Packing located in abutments. Quantity of this suspect material located on the bridge structure is unknown.
- 10. Tar Paper 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 Items 1-3 and 5-10, above. Three (3) additional suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

- 1. Expansion Material located in parapet walls. HzW sampled this suspect material (Sample Nos. 01 and 02) and no asbestos was identified in the samples collected.
- 2. Expansion Material located where abutment meets parapet walls. 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. 4 listed above.
- 3. Expansion Material located at base of pier columns. HzW sampled this suspect material (Sample Nos. 05 and 06) and no asbestos was identified in the samples collected.

CUY-90-1490L (SFN 1809342) Over Starkweather Avenue and CUY-90-1490R (SFN 1807625) Over Starkweather Avenue

Based on a review of the construction plans dated April 8, 1965 (Pages 1 thru 504) for these bridges, ten (10) suspect ACMs were noted as being used during construction of these bridges. These suspect ACMs consisted of the following:

- 1. ¼-inch by 4-inch Expansion Joint Material located on both superstructures. Quantity of this suspect material located on the bridge structures is unknown.
- 2. ½-inch Preformed Expansion Joint Filler where pull box is in contact with other concrete for both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 3. Type I Fiber Ducts or Galvanized Steel Conduit for Foundation Conduit Bends associated with Lighting for both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 4. I-inch Preformed Expansion Joint Filler located around each pier column for both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 5. 1-inch Preformed Expansion Joint Filler located in abutments of the CUY-90-1490R bridge only. Quantity of this suspect material located on this bridge structure is 48 square feet.
- 6. ½-inch Preformed Expansion Joint Filler located in abutments of both bridges. Quantity of this suspect material located on each bridge structure is 162 square feet for the CUY-90-1490R bridge and 48 square feet for the CUY-90-1490L bridge.
- 7. 6-inch Performed Helical Corrugated Metal Pipe (CMP) located in abutments of both bridges. Quantity of this suspect material located on each bridge structure is 167 linear feet on the CUY-90-1490R bridge and 56 linear feet on the CUY-90-1490L bridge.
- 8. 6-inch Non Performed Helical Corrugated Metal Pipe (CMP) located in abutments of both bridges. Quantity of this suspect material located on each bridge structure is 275 linear feet on the CUY-90-1490R bridge and 70 linear feet on the CUY-90-1490L bridge.
- 9. 12-inch by ½-inch Premolded Sealing Strip located at top of footing to bottom of approach slab or to 6-inches below median on the CUY-90-1490R bridge. Quantity of this suspect material located on this bridge structure is 62 linear feet.
- 10. Construction Joints located in abutments, wing walls, piers and deck on both bridges. Quantity of this suspect material located on the bridge structures is unknown.

During the physical inspection of the bridge, HzW could not locate Items 1-5 and 7-10, above. Three (3) additional suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

- 1. Expansion Material located in abutment meets parapet walls of both bridges. 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. 6 listed above.
- 2. Expansion Material located in parapet walls of both bridges. HzW sampled this suspect material (Sample Nos. 03 and 04) and no asbestos was identified in the samples collected.
- 3. Expansion Material located where the abutment meets the underside sloped concrete wall of both bridges. HzW sampled this suspect material (Sample Nos. 05 and 06) and no asbestos was identified in the samples collected.

CUY-90-1506 (SFN 1807684) Over Kenilworth Avenue

Based on a review of the construction plans dated April 8, 1965 (Pages 1 thru 504) for this bridge, ten (10) suspect ACMs were noted as being used during construction of the bridge. These suspect ACMs consisted of the following:

- 1. ¼-inch by 4-inch Expansion Joint Material located on superstructure. Quantity of this suspect material located on the bridge structure is unknown.
- 2. ½-inch Preformed Expansion Joint Filler where pull box is in contact with other concrete. Quantity of this suspect material located on the bridge structure is unknown.
- 3. Type I Fiber Ducts or Galvanized Steel Conduit for Foundation Conduit Bends associated with Lighting. Quantity of this suspect material located on the bridge structure is unknown.
- 4. 1-inch Preformed Expansion Joint Filler located around each pier column. Quantity of this suspect material located on the bridge structure is unknown.
- 5. 1-inch Preformed Expansion Joint Filler located in abutments. Quantity of this suspect material located on the bridge structure is 47 square feet.
- 6. ½-inch Preformed Expansion Joint Filler located in abutments. Quantity of this suspect material located on the bridge structure is 165 square feet.
- 7. 6-inch Performed Helical Corrugated Metal Pipe (CMP) located in abutments. Quantity of this suspect material located on the bridge structure is 281 linear feet.
- 8. 6-inch Non Performed Helical Corrugated Metal Pipe (CMP) located in abutments. Quantity of this suspect material located on the bridge structure is 165 linear feet.
- 9. 12-inch by ½-inch Premolded Sealing Strip located at top of footing to bottom of approach slab or to 6-inches below median. Quantity of this suspect material located on the bridge structure is unknown.
- 10. Construction Joints located in abutments, wing walls, piers and deck. Quantity of this suspect material located on the bridge structure is unknown.

During the physical inspection of the bridge, HzW could not locate Items 1 - 10, above. One (1) additional suspect ACM was identified during the physical inspection. This suspect material consisted of the following:

1. Expansion Gasket Material – located in parapet walls. HzW sampled this suspect material (Sample Nos. 01 and 02) and no asbestos was identified in the samples collected.

CUY-90-15.24 (SFN 1809393) Innerbelt Bridge over Cuyahoga River

Based on a review of the construction plans dated April 8, 1965 (Pages 1 thru 504) for this bridge, thirty-one (31) suspect ACMs were noted as being used during construction of the bridges. These suspect ACMs consisted of the following:

West Approach

- 1. 3-inch Fiber or Asbestos Cement Conduit for Lighting Cables located in parapet. Quantity of this suspect material located on the bridge structure is unknown.
- 2. 3-inch Transite conduit or equal for Lighting Cables located in concrete foundation from transformer pole base box. Quantity of this suspect material located on the bridge structure is unknown.
- 3. 3-inch Transite Conduit for lighting located in concrete pull box. Quantity of this suspect material located on the bridge structure is unknown.
- 4. 12-inch by ½-inch Premolded Sealing Strip located at top of footing to 9-inches below top of curb. Quantity of this suspect material located on the bridge structure is unknown.
- 5. Construction Joints located in abutments, retaining walls and piers. Quantity of this suspect material located on the bridge structure is unknown.
- 6. 1-inch Gray Rubber Preformed Expansion Joint Filler located in abutments. Quantity of this suspect material located on the bridge structure is 170 square feet.
- 7. 3-inch Johns Manville Transite or Equal Conduit running under pavement. Quantity of this suspect material located on the bridge structure is unknown.

Central Viaduct

- 8. Construction Joints located in slab and piers. Quantity of this suspect material located on the bridge structure is unknown.
- 9. 1-inch Preformed Gray Rubber Expansion Joint Filler located in abutments. Quantity of this suspect material located on the bridge structure is 73.2 square feet.
- 10. 3-inch conduit located under each sidewalk. Quantity of this suspect material located on the bridge structure is unknown.
- 11. 4 2-inch conduits located transversely in Span 1 and Span 9. Quantity of this suspect material located on the bridge structure is unknown.
- 12. Expansion Joint located in piers. Quantity of this suspect material located on the bridge structure is unknown.
- 13. ½-inch Poured Mastic Joints associated with roadway drainage. Quantity of this suspect material located on the bridge structure is unknown.
- 14. ½-inch Filler located at floor beams. Quantity of this suspect material located on the bridge structure is unknown.
- 15. 1-inch Hot Poured Joint Sealer associated with drainage. Quantity of this suspect material located on the bridge structure is unknown.
- 16. ½-inch Sponge Rubber Expansion Joint Material located on superstructure. Quantity of this suspect material located on the bridge structure is 716 square feet.

East Approach

- 17. 2-inch or 3-inch Fiber or Asbestos Cement Conduit for Lighting Cables located in parapet. Quantity of these suspect materials located on the bridge structure is 3,550 linear feet.
- 18. Asbestos Wire for Lighting installed between the bracket end at luminaire and lamp socket. Insulation shall be asbestos applied to conductor to form a continuous tube of asbestos fibers at least 40 mils thick tightly compressed and impregnated with a flame heat & moisture proof compound and an outer asbestos braid at least 45 mils thick. Quantity of this suspect material located on the bridge structure is unknown.
- 19. 2-Way Duct Bank for Lighting Containing 2-inch Nonmetallic Conduit. Quantity of these suspect materials located on the bridge structure is unknown.
- 20. 12-inch by ½-inch Premolded Sealing Strip located from bottom of footing to bottom of approach slab in abutments and from top of footing to 9-inches below top of curb in wing wall. Quantity of this suspect material located on the bridge structure is 60 linear feet.
- 21. ½-inch Bituminous Premoulded Joint Filler associated with Riprap expansion joints. Quantity of this suspect material located on the bridge structure is unknown.
- 22. Construction Joints located in abutments and piers. Quantity of this suspect material located on the bridge structure is unknown.
- 23. ½-inch Premoulded Gray Rubber Expansion Joint Material located in approach slabs. Quantity of this suspect material located on the bridge structure is unknown.
- 24. 2-inch Duct located in concrete foundation from transformer pole base box. Quantity of this suspect material located on the bridge structure is unknown.
- 25. 4-inch Duct location unknown. Quantity of this suspect material located on the bridge structure is 350 linear feet.
- 26. 1 Layer of Tar Paper located in abutments, footings, and piers. Quantity of this suspect material located on the bridge structure is unknown.
- 27. Handrail Caulking Compound located on parapet sidewalk. Quantity of this suspect material located on the bridge structure is unknown.
- 28. 1-inch Hot Poured Joint Filler located in construction joints on wearing surface. Quantity of this suspect material located on the bridge structure is unknown.
- 29. ¼-inch Gray Rubber Deflection Joint Material location unknown. Quantity of this suspect material located on the bridge structure is unknown.
- 30. Transverse Conduit located under roadway. Quantity of this suspect material located on the bridge structure is unknown.
- 31. ½-inch Gray Rubber Preformed Expansion Joint Filler located in piers and abutments. Quantity of this suspect material located on the bridge structure is 330 square feet.

During the physical inspection of the bridge, HzW could not locate Items 1-24 and 26-31, above. Five (5) additional suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

- 1. Epoxy Material underneath Fence Post Brackets located on parapet walls. HzW sampled this suspect material (Sample Nos. 01 through 04) and no asbestos was identified in the samples collected.
- 2. Gasket Material located in parapet walls. HzW sampled this suspect material (Sample Nos. 05 and 06) and no asbestos was identified in the samples collected.

- 4-inch fiber conduit located in abutment walls. HzW sampled this suspect material (Sample Nos. 07 and 08 and 11 and 12) and from 32.5 to 43.1 percent asbestos was identified in the samples collected. This material is similar to Item No. 25, above located in the East Approach of this bridge. It should be noted that this same asbestos-containing material was also identified in the West Approach; however, it was not documented in the construction plans. HzW estimated that approximately 350 linear feet of this material is located in the West Approach of this bridge.
- 4. 3-inch Tar-Coated Cellulose Duct located in parapet walls. HzW sampled this suspect material (Sample Nos. 09 and 10) and no asbestos was identified in the samples collected.
- 5. Expansion Gasket Material located in abutments. HzW sampled this suspect material (Sample Nos. 13 and 14) and no asbestos was identified in the samples collected.

CUY-90-1628EW (SFN 1807552) Center Bridge, CUY-90-1628L (SFN 1807498) Northern most Bridge and CUY-90-1628R (SFN 1807714) Southern most Bridge over East 9th Street

Based on a review of the construction plans dated March 9, 1960 (Pages 1 thru 148) for these bridges, twelve (12) suspect ACMs were noted as being used during construction of the bridges. These suspect ACMs consisted of the following:

- 1. 2-inch and 4-inch Fiber or Asbestos Cement Conduit for Lighting cables located in parapet, retaining walls and superstructure of all bridges. Quantity of these suspect materials located on the bridge structures is 740 and 65 linear feet, respectively.
- 2. Asbestos Wire for Lighting installed between the bracket end at luminaire and lamp socket of all bridges. Insulation shall be asbestos applied to conductor to form a continuous tube of asbestos fibers at least 40 mils thick tightly compressed and impregnated with a flame heat & moisture proof compound and an outer asbestos braid at least 45 mils thick. Quantity of this material located on the bridge structures is unknown.
- 3. 2-Way Duct Bank for Lighting Containing 2 2-inch Fiber or Asbestos Conduit located in all bridges. Quantity of this suspect material located on the bridge structures is 350 linear feet.
- 4. 3-Way Duct Bank for Lighting Containing 3 4-inch Fiber or Asbestos Conduit located in all bridges. Quantity of this suspect material located on the bridge structures is 150 linear feet.
- 5. 4-Way Duct Bank for Lighting Containing 2 2-inch and 2-4-inch Fiber or Asbestos Conduit located in all bridges. Quantity of this suspect material located on the bridge structures is 175 linear feet.
- 6. Conduit for Lighting located in concrete pull boxes of all bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 7. 12-inch by ½-inch Premolded Sealing Strip located in abutments in recess from top of footing to bottom of approach slab and to 6-inch below top of median of all bridges. Quantity of this suspect material located on the bridge structures is 60 linear feet.
- 8. ¾-inch Premoulded Expansion Joint Material located in front of bumper block to within 2-inches of the surface of all bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 9. Bituminous filler located in front of bumper block to within 2-inches of the surface of all bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 10. Construction Joints located in abutments and piers of all bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 11. 1-inch Preformed Expansion Joint Filler located in piers of all bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 12. 1-inch Preformed Gray Sponge Rubber Expansion Joint Filler located in abutments of all bridges. Quantity of this suspect material located on the bridge structures is 80 square feet.

During the physical inspection of the three (3) bridges, HzW could not locate Items 1 - 12, above. Five (5) additional suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

- 1. Epoxy Material underneath New Guard Rail Mounts located on parapet walls of all three (3) bridges. HzW sampled this suspect material on each bridge (Sample Nos. 01 and 02 for each bridge) and no asbestos was identified in the samples collected.
- 2. 3-inch Tar-Coated Cellulose Duct located in parapet walls of all three (3) bridges. HzW sampled this suspect material on each bridge (Sample Nos. 03 and 04 for each bridge) and no asbestos was identified in the samples collected.
- 3. Gasket Material underneath Old Guard Rail Mounts located on parapet walls of all three (3) bridges. HzW sampled this suspect material on each bridge (Sample Nos. 05 and 06 for the Central bridge and Sample Nos. 07 and 08 for the Northern-most and Southern-most bridges) and from 2.1 to 2.5 percent asbestos was identified in the samples collected. The quantity of this asbestos-containing material identified on all three (3) bridges is 30 square feet (6 square feet on the Central bridge, 15 square feet on the Northern most bridge and 9 square feet on the Southern most bridge).
- 4. Gasket Material located in parapet walls of all three (3) bridges. HzW sampled this suspect material on each bridge (Sample Nos. 07 and 08 for the Central bridge and Sample Nos. 05 and 06 for the Northern-most and Southern-most bridges) and no asbestos was identified in the samples collected.
- 5. Thick Gasket Material located where the bridge deck meets the abutment of the Northern-most bridge. HzW sampled this suspect material (Sample Nos. 09 and 10) and no asbestos was identified in the samples collected.

CUY-90-1640 (SFN 1807773) Over Ramps E-10 and E-8

Based on a review of the construction plans dated March 9, 1960 (Pages 101 thru 113) for this bridge, sixteen (16) suspect ACMs were noted as being used during construction of the bridge. These suspect ACMs consisted of the following:

- 1. 2-inch and 4-inch Fiber or Asbestos Cement Conduit for Lighting cables—in parapet, retaining walls and superstructure. Quantity of these suspect materials located on the bridge structure is estimated at 715 and 20 linear feet, respectively.
- 2. 2-inch Fiber Conduit for Lighting Cables in concrete foundation from transformer pole base box. Quantity of this suspect material located on the bridge structure is unknown.
- 3. Asbestos Wire for Lighting installed between the bracket end at luminaire and lamp socket. Insulation shall be asbestos applied to conductor to form a continuous tube of asbestos fibers at least 40 mils thick tightly compressed and impregnated with a flame heat & moisture proof compound and an outer asbestos braid at least 45 mils thick. Quantity of this suspect material located on the bridge structure is unknown
- 4. 2-Way Duct Bank for Lighting Containing 2 2-inch and 1 4-inch Fiber or Asbestos Conduit. Quantity of these suspect materials located on the bridge structure is 583 and 35 linear feet, respectively.
- 5. 3-Way Duct Bank for Lighting Containing 3 2-inch Fiber or Asbestos Conduit. Quantity of this suspect material located on the bridge structure is 130 linear feet.
- 6. 4-Way Duct Bank for Lighting Containing 2 2-inch Fiber or Asbestos Conduit. Quantity of these suspect materials located on the bridge structure is 287 linear feet.
- 7. Transite Conduit for Lighting located in concrete pull box. Quantity of this suspect material located on the bridge structure is unknown.

- 8. 12-inch by ½-inch Premolded Sealing Strip located in abutments and retaining walls in recess from top of footing to bottom of approach slab and to 6-inch below top of median. Quantity of this suspect material located on the bridge structure is 80 linear feet.
- 9. ³/₄-inch Premoulded Expansion Joint Material located in front of bumper block to within 2-inches of the surface. Quantity of this suspect material located on the bridge structure is unknown.
- 10. Bituminous Filler located in front of bumper block to within 2-inches of the surface. Quantity of this suspect material located on the bridge structure is unknown.
- 11. Construction Joints located in abutments, retaining walls, nose and piers. Quantity of this suspect material located on the bridge structure is unknown.
- 12. ½-inch Bituminous Preformed Joint Filler located in abutments for drainage. Quantity of this suspect material located on the bridge structure is unknown.
- 13. 1-inch Expansion Joint located in abutments and end dam. Quantity of this suspect material located on the bridge structure is unknown.
- 14. Poured Joint Sealer associated with junction boxes at median. Quantity of this suspect material located on the bridge structure is unknown.
- 15. 1-inch Preformed Expansion Joint Filler located in piers. Quantity of this suspect material located on the bridge structure is unknown.
- 16. ¼-inch Preformed Gray Sponge Rubber Expansion Joint Filler located in parapet joints. Quantity of this suspect material located on the bridge structure is unknown.

During the physical inspection of the bridge, HzW could not locate Items 1 - 15, above. Four (4) additional suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

- 1. Epoxy Material underneath New Guard Rail Mounts located on parapet walls. HzW sampled this suspect material (Sample Nos. 01 and 02) and no asbestos was identified in the samples collected.
- 2. 3-inch Tar-Coated Cellulose Duct located in parapet walls. HzW samples this suspect material (Sample Nos. 03 and 04) and no asbestos was identified in the samples collected.
- 3. Expansion Material located in parapet walls. 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. 16, above
- 4. Gasket Material underneath Old Guard Rail Mounts located on parapet walls of both bridges. HzW sampled this suspect material (Sample Nos. 07 and 08) and from 3.7 to 3.9 percent asbestos was identified in the samples collected. Approximately 15 square feet of this asbestos-containing material is located on the bridge structure.

CUY-90-1651L (SFN 1807900) and CUY-90-1651R (SFN 1807803) Over East 14th Street

Based on a review of the construction plans dated March 9, 1960 (Pages 1 thru 181) for these bridges, sixteen (16) suspect ACMs were noted as being used during construction of the bridges. These suspect ACMs consisted of the following:

- 1. 2-inch and 4-inch Fiber or Asbestos Cement Conduit for Lighting cables in parapet, retaining walls and superstructure of both bridges. Quantity of these suspect materials located on the bridge structures is 1,350 and 690 linear feet, respectively.
- 2. 2-inch fiber conduit for lighting cables in concrete foundation from transfer pole base box of both bridges. Quantity of this suspect material located on the bridge structures is unknown.

- 3. Asbestos wire for lighting installed between the bracket end at luminaire and lamp socket of both bridges. Insulation shall be asbestos applied to conductor to form a continuous tube of asbestos fibers at least 40 mils thick tightly compressed and impregnated with a flame heat & moisture proof compound and an outer asbestos braid at least 45 mils thick. Quantity of this suspect material located on the bridge structures is unknown.
- 4. 2-Way Duct Bank for Lighting Containing 2 2-inch and 1 4-inch Fiber or Asbestos Conduit-located in both bridges. Quantity of these suspect located on the bridge structures is 583 and 35 linear feet, respectively.
- 5. 3-Way Duct Bank for lighting containing 3 2-inch fiber or asbestos conduit—located in both bridges. Ouantity of this suspect material located on the bridge structures is 130 linear feet.
- 6. 4-Way Duct Bank for lighting containing 2 2-inch fiber or asbestos conduit—located in both bridges. Quantity of these suspect materials located on the bridge structures is 287 linear feet.
- 7. Transite Conduit for lighting located in concrete pull box of both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 8. 12-inch by ½-inch Premolded Sealing Strip located in abutments and retaining walls in recess from top of footing to bottom of approach slab and to 6-inch below top of median of both bridges. Quantity of this suspect material located on the bridge structures is 144 linear feet.
- 9. ¾-inch Premoulded Expansion Joint Material located in front of bumper block to within 2-inches of the surface of both bridges. Quantity of this suspect material located on the bridge structures is unknown
- 10. Bituminous filler located in front of bumper block to within 2-inches of the surface of both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 11. Construction Joints located in abutments, retaining walls, nose and piers of both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 12. ½-inch Bituminous Preformed Joint Filler located in abutments for drainage of both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 13. 1-inch Expansion Joint located in abutments and end dam of both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 14. Poured Joint Sealer associated with junction boxes at median of both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 15. 1-inch Preformed Expansion Joint Filler located in piers of both bridges. Quantity of this suspect material located on the bridge structures is unknown.
- 16. ¼-inch Preformed Gray Sponge Rubber Expansion Joint Filler located in parapet joints of both bridges. Quantity of this suspect material located on the bridge structures is unknown.

During the physical inspection of the two (2) bridges, HzW could not locate Items 1 - 15, above. Four (4) additional suspect ACMs were identified during the physical inspection. These suspect materials consisted of the following:

- 1. Epoxy Material underneath New Guard Rail Mounts located on parapet walls of both bridges. HzW sampled this suspect material (Sample Nos. 01 and 02) and no asbestos was identified in the samples collected.
- 2. 3-inch Tar-Coated Cellulose Duct located in parapet walls of both bridges. HzW samples this suspect material (Sample Nos. 03 and 04 and 07 and 08) and no asbestos was identified in the samples collected.
- 3. Expansion Material located in parapet walls of both bridges. 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. 16, above.

4. Gasket Material underneath Old Guard Rail Mounts – located on parapet walls of both bridges. HzW sampled this suspect material (Sample Nos. 09 and 10) and from 3.1 to 3.4 percent asbestos was identified in the samples collected. Approximately 15 square feet of this asbestos-containing material was identified on the bridge structures.

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, the 9th Street Bridge's and the East 14th Street Bridge's suspect material quantities were divided among the three (3) bridges comprising the 9th Street Bridges or the two (2) bridges comprising the East 14th Street Bridges, due to the construction plans not indicating the specific locations for these materials.

In addition, it should be noted that the construction plans indicated linear feet for building materials entitled joint filler, joint material, corrugated metal pipe, and sealing strip. EPA's Notification of Demolition and Renovation form only permits asbestos-containing pipe to be quantified in linear feet. Therefore, in order to report the quantities of joint filler, joint material, corrugated metal pipe and sealing strip properly on the notification form, HzW converted each quantity of these materials to a square footage quantity. This was performed by assuming a width of one (1) foot for each material. As a result, these square footage quantities could vary depending of the actual width of the materials on the bridge structures.

- 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.
- 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

(25) august . I custos

ran a Dablay(03)

Matthew P. Fergus

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

Joan A. Sablar

Senior Industrial Hygienist

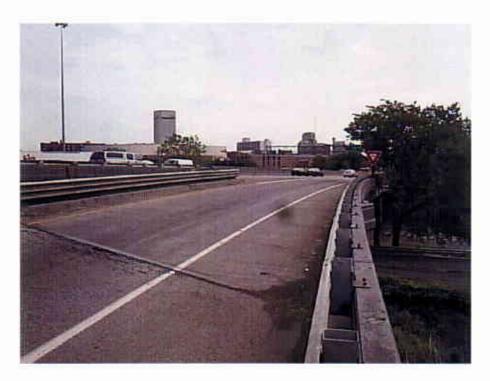
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Attachments

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ATTACHMENT 1

PHOTOGRAPHIC LOG



Photograph 01 View Looking East at the Top of the East Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651R)

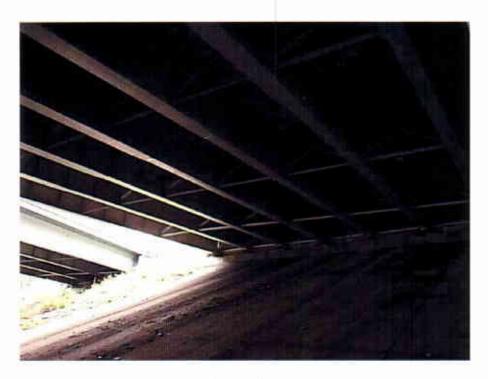


Photograph 02
View Looking East at the Top of the West Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651L)





Photograph 03
View Looking West at the Underside of the West Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651L)

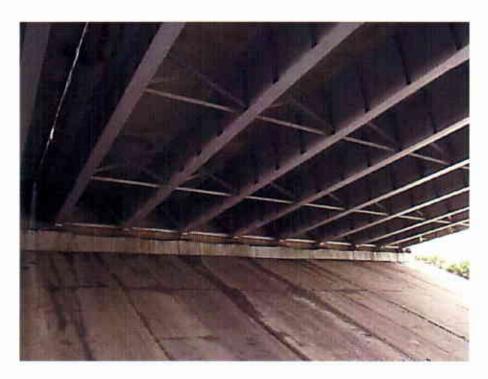


Photograph 04
View Looking West at the Underside of the East Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651R)





Photograph 05
View Looking East at the Underside of the West Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651L)



Photograph 06
View Looking East at the Underside of the East Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651R)





Photograph 07 View Looking West at the Top of the East Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651R)

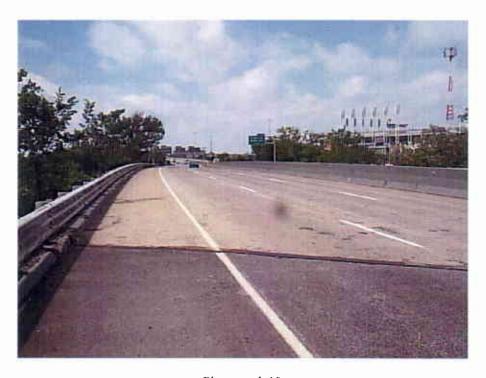


Photograph 08
View Looking West at the Top of the West Bound Lanes of the Interstate 90 Bridge over East 14th Street (CUY-90-1651L)





Photograph 09
View Looking East at the Top of the East Bound Lanes of the Interstate 90 Bridge over Ramps E-10 and E-8 (CUY-90-1640)



Photograph 10 View Looking West at the Top of the East Bound Lanes of the Interstate 90 Bridge over Ramps E-10 and E-8 (CUY-90-1640)





Photograph 11
View Looking East at the Underside of the East and West Bound Lanes of the Interstate 90 Bridge over Ramps E-10 and E-8 (CUY-90-1640)



Photograph 12 View Looking West at the Top of the West Bound Lanes of the Interstate 90 Bridge over Ramps E-10 and E-8 (CUY-90-1640)





Photograph 13 View Looking East at the Top of the West Bound Lanes of the Interstate 90 Bridge over Ramps E-10 and E-8 (CUY-90-1640)



Photograph 14
View Looking West at the Underside of the East and West Bound Lanes of the Interstate 90 Bridge over Ramps E-10 and E-8 (CUY-90-1640)





Photograph 15
View Looking West at the Top of the West Bound On Ramp of the Interstate 90 Bridge over East 9th Street (CUY-90-1628EW)



Photograph 16
View Looking East at the Top of the West Bound On Ramp of the Interstate 90 Bridge over East 9th Street (CUY-90-1628EW)





Photograph 17
View Looking West at the Underside of the West Bound On Ramp of the Interstate 90 Bridge over East 9th Street (CUY-90-1628EW)



Photograph 18
View Looking East at the Underside of the West Bound On Ramp of the Interstate 90 Bridge over East 9th Street (CUY-90-1628EW)





Photograph 19
View Looking West at the Top of the West Bound Lanes of the Interstate 90 Bridge over East 9th Street (CUY-90-1628L)



Photograph 20
View Looking West at the Underside of the West Bound Lanes of the Interstate 90 Bridge over East 9th Street (CUY-90-1628L)



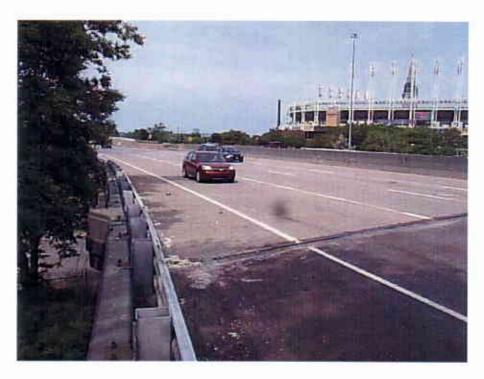


Photograph 21 View Looking East at the Underside of the West Bound Lanes of the Interstate 90 Bridge over East 9th Street (CUY-90-1628L)



Photograph 22
View Looking East at the Underside of the East Bound Lanes of the Interstate 90 Bridge over East 9th Street (CUY-90-1628R)





Photograph 23
View Looking West at the Top of the East Bound Lanes of the Interstate 90 Bridge over East 9th Street (CUY-90-1628R)



Photograph 24
View Looking East at the Top of the East Bound Lanes of the Interstate 90 Bridge over East 9th Street (CUY-90-1628R)





Photograph 25
View Looking West at the Underside of the East Bound Lanes of the Interstate 90 Bridge over East 9th Street (CUY-90-1628R)



Photograph 26
View Looking North at the Top of the West Bound Lanes of the
Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)





Photograph 27
View Looking South at the Underside of the East and West Bound Lanes of the Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)



Photograph 28
View Looking North at the Top of the East Bound Lanes of the
Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)





Photograph 29

View Looking South at the Underside of the East Bound On Ramp Lane of the Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)



Photograph 30
View Looking West at the Underside of the East Bound Off Ramp Lane of the Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)





Photograph 31
View Looking West at the Underside of the East and West Bound Lanes of the Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)



Photograph 32
View Looking West at the Top of the East Bound Lanes of the
Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)





Photograph 33
View Looking West at the Top of the West Bound Lanes of the
Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)

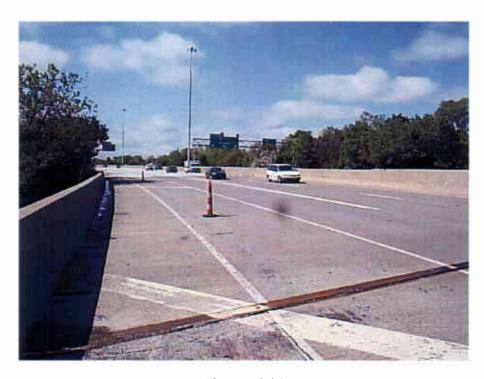


Photograph 34
View Looking North at the Underside of the West Bound On Ramp Lane of the Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)





Photograph 35
View Looking South at the Underside of the West Bound Off Ramp Lane of the Interstate 90 Innerbelt Bridge over the Cuyahoga River (CUY-90-15.24)



Photograph 36 View Looking South at the Top of the East Bound Lanes of the Interstate 90 Bridge over Kenilworth Avenue (CUY-90-1506)





Photograph 37
View Looking North at the Underside of the East and West Bound Lanes of the Interstate 90 Bridge over Kenilworth Avenue (CUY-90-1506)



Photograph 38
View Looking South at the Top of the West Bound Lanes of the Interstate 90 Bridge over Kenilworth Avenue (CUY-90-1506)



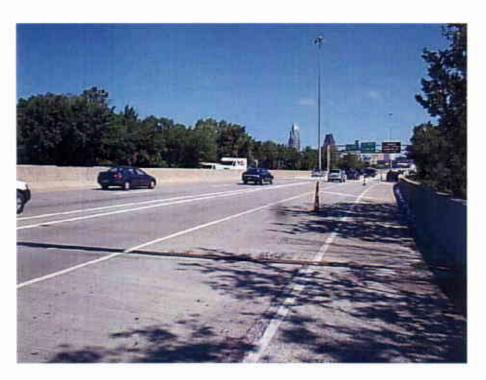


Photograph 39
View Looking North at the Top of the West Bound Lanes of the Interstate 90 Bridge over Kenilworth Avenue (CUY-90-1506)



Photograph 40
View Looking South at the Underside of the East and West Bound Lanes of the Interstate 90 Bridge over Kenilworth Avenue (CUY-90-1506)





Photograph 41 View Looking North at the Top of the East Bound Lanes of the Interstate 90 Bridge over Kenilworth Avenue (CUY-90-1506)

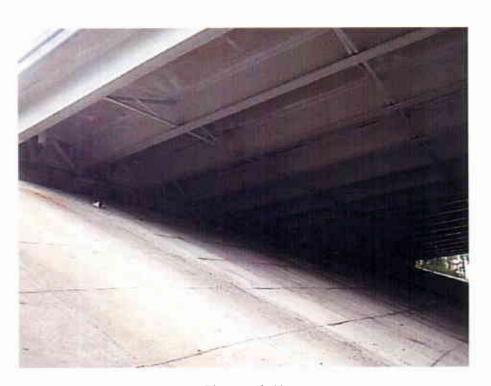


Photograph 42 View Looking North at the Top of the West Bound Lanes of the Interstate 90 Bridge over Starkweather Avenue (CUY-90-1490L)





Photograph 43
View Looking South at the Top of the West Bound Lanes of the Interstate 90 Bridge over Starkweather Avenue (CUY-90-1490L)



Photograph 44
View Looking North at the Underside of the East and West Bound Lanes of the Interstate 90 Bridge over Starkweather Avenue (CUY-90-1490L)





Photograph 45
View Looking South at the Top of the East Bound Lanes of the Interstate 90 Bridge over Starkweather Avenue (CUY-90-1490R)

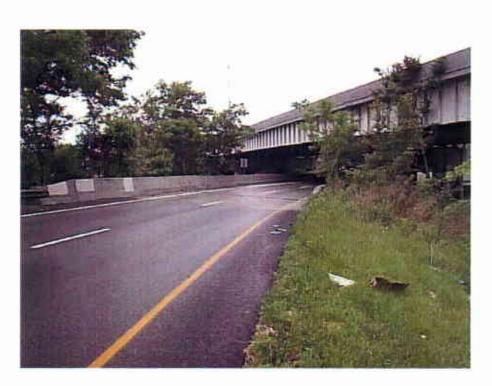


Photograph 46
View Looking North at the Top of the East Bound Lanes of the Interstate 90 Bridge over Starkweather Avenue (CUY-90-1490R)





Photograph 47
View Looking South at the Underside of the East and West Bound Lanes of the Interstate 90 Bridge over Starkweather Avenue (CUY-90-1490R)



Photograph 48
View Looking South at the Top of the East Bound Lanes of the
Interstate 90 Bridge Ramp WN under I-71 Mainline Bridge (CUY-90-1463R)



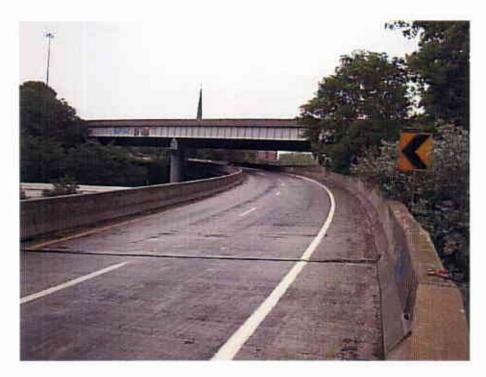


Photograph 49
View Looking North at the Underside of the East Bound Lanes of the Interstate 90 Bridge Ramp WN under I-71 Mainline Bridge (CUY-90-1463R)



Photograph 50
View Looking West at the Underside of the East Bound Lanes of the Interstate 90 Bridge Ramp WN under I-71 Mainline Bridge (CUY-90-1463R)





Photograph 51
View Looking Northwest at the Top of the East Bound Lanes of the
Interstate 90 Bridge Ramp WN under I-71 Mainline Bridge (CUY-90-1463R)



ATTACHMENT 2

LABORATORY ANALYTICAL REPORTS

CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

6105 Heisley Rd.

Montor

OH

44060

Report Date: 6/12/2009

Project:

CUY-90-1463R

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .: Client No.: 3640995

0I

Description / Location:

Grey Rubber Non Fibrous

Expansion Material

% Ashestos

Турс

% Non-Ashestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3640996

Description / Location:

Grey Rubber Non Fibrous

Expansion Material

% Asbestos

Type

% Non-Ashestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

Client No.:

Nane Detected

None Detected

None Detected

100

Lab No.:

3640997

Description / Location:

Brown Fibrous

Expansion Material

% Asbestos

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

Client No.: 03

<u> Type</u> None Detected

Cellulose

Lab No.:

3640998

Description / Location:

Brown Fibrous

Expansion Material

Client No.: % Asbestos

<u>Type</u>

% Non-Asbestos Fibrous Material

Туре

% Non-Fibrous Material

Nane Detected

None Detected

99

Cellulose

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

(PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is passible 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:

6/12/2009

Page 1 of 423

Frank E. Ehrenfeld, III Laboratory Director



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

Report Date: 6/12/2009

6105 Heisley Rd.

Project:

CUY-90-1463R

Mentor

OH

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .:

% Asbestos

3640999

Description / Location:

44060

Brown Fibrous

Client No.: 05

Expansion Material

Τγρε

% Non-Asbestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

100

Collulose

None Detected

Lab No.:

3641000

Description / Location:

Brown Fibrous

Expansion Material

% Asbestos

Type

% Non-Asbertos Fibrous Material

Type

% Non-Fibrous Material

None Detected

Client No.: 06

None Detected

100

Cellulose

None Detected

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Performed By: E. Smith

Date:

6/12/2009

1690003 to	al Asbestos Testing Laboratories Tel. 856 231-9449 Fax 856 231-9818 New Jersey 08054
	- Chain of Custody -
Client:	HzW Environmental Consultants 6105 Hastey Rd. Mention, on 44060 Project Name: CUY-90-1463 R Project No.: H0 9004-07
Phone: FAX: Special	440 - 357 - 1260 Contact: Joan Sablar 440 - 357 - 1510 Pager: PO # 5/62 - 09
Instructio	ta:
Type:	<u>Asbestos</u> <u>Lead</u> <u>Other</u>
· · · · · · · · · · · · · · · · · · ·	[] Air [] Soil [] Air [] Soil [] Bulk [] Paint [] Water [] Other [] Water [] Other []
Analysi	Method:
٠. بحدا -	[] PCM: NIOSH 7400 [] PLM: Bulk Asbestos EPA 600 [] TEM: AHERA [] PCM: OSHA [] PLM: Point Counting 198.1 [] TEM: NIOSH 7402 [] PCM: Other [] PLM: NOB via 198.1 (PLM only) [] TEM: EPA Level II [] If <1% by PLM, to TEM via 198.4 [] TEM: Microvac / Wipe to meet NYSDOH requirements ** [] TEM: Asbestos in Water [] AAS: Lead in Prinking Water (**call to confirm TAT!) [] TEM: Bulk Analysis [] TEM: NOB 198.4 [] TEM: NOB 198.4 [] TEM: Other [] Total Dust: NIOSH 0500
Turnard Time:	und YAX: Verbals:
	[] 10 Day [] 5 Day [] 3 Day [] 2 Day [] 1 Day [] 6 hour [] RUSH Preliminary FAX/Verbal Results Requested by:
Sample Number	Client #(s): 07 06 IATL#(s):
Chain of Custody	
	Relinquished: Received: Sample Log-in: Date: Da
	Archived/Released: QA/QC InterLAB Usc: Date: Time:

. International Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mr. Laurel, NJ 08054 Tel 856 231-9449 Fax 856 231-9818 info@istl.com

Phone: FAX:)	Project No.: Contact: Analysis:	HO9004-07 Joan Sablar Best Ply	<u> </u>
Special 1	nstructions:	<u>:</u>				- -

Consulate Some of	e Sumple	Citi		
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03	1847	97		Expansion material - Shows
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05	366	199		Expansion Material - Fibrary
06	36416	0.0		
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Relinquished:	- tw	•	Date: 6/10/	Time: 4
Received:		,	Date:	Time:
Sample Log-in:			Date:	Time:
Sample Prep:		· ·	Date:	Time:
Analyzed:		-	Date:	Time:
QA/QC Review:			Date:	Time:

Page 2 of 2

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: 6/12/2009

Project:

CUY-90-1490 L+R

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .: Client No.: 3640989

Description / Location:

Brown Fibrous

Expansion Material

% Asbestos

Туре

% Non-Asbestos Pibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

95

Cellulose

Lab No.:

3640990

Description / Location:

Brown Fibrous

Expansion Material

Client No.: 02 % Aspestos

Турс

% Non-Ashestos Fibrous Material

% Non-Fibrous Material

None Detected

None Detected

95

Cellulose

5

Lab No.:

3640991

Description / Location:

Lt. Grey Rubber Non Fibrous

Expansion Material

Expansion Material

Client No.: 03

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No .:

3640992

Description / Location:

Lt. Grey Rubber Non Fibrous

Client No.: 04

Туре

% Non-Asbestos Fibrous Material

Туре

% Non-Fibrous Material

% Axbestos None Detected

None Detected

None Detected

None Detected

100

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Performed By: E. Smith

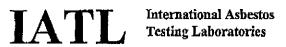
Approved By:

Date:

6/12/2009

Page 14072

Frank E. Ehrenfeld, III Laboratory Director



CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

6105 Heisley Rd.

Mentor

OH

44060

Report Date: 6/12/2009

Project:

CUY-90-1490 L+R

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .: Client No.: 3640993

Description / Location:

Brown Fibrous

Expansion Material

% Asbestos

<u>Type</u>

% Non-Asbestos Fibrous Material.

Type

% Non-Fibrous Material

None Detected

None Detected

Cellulose

5

Lab No.: Client No.: 3640994

06

Description / Location:

Brown Fibrous

Expansion Material

% Asbestos

<u>Tyne</u>

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

95

Cellulose

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Performed By: E. Smith

Date:

6/12/2009

460000 16	onal Asbestos Testing Laboratories ***********************************	. SuiteB	TeL 856 231-9449 Fax 856 231-9818
	- Chain	of Custody -	
Client:	[1 1 1 C	Project Name	: CUY-90-1490 L+R
	6105 Hestey Rd.	Project No.:	Ho. 9004-07
	Mentor, on 44060		
Phone: FAX:	<u>440 - 357-1260</u> <u>440 - 357 - 1510</u>	Contact: Pager;	Joan Sublar
Special			09
Instruction	ons:		
Type:			
	<u>Asbestos</u>	Lead	<u>Other</u>
	[] Air [] Soil [X] Bulk [] Dust [] Water [] Other	[] Air [] [] Bulk [] [] Water []	Soil Paint Other
Analys	sis Method:		
>- >	[] PCM:Osha [] [] PCM:Other []	PLM: Bulk Asbestos EPA 600 PLM: Point Counting 198,1 PLM: NOB via 198.1 (PLM o If <1% by PLM, to TEM to meet NYSDOH requirements (**call to confirm TAT!)	[] TEM; NIOSH 7402 NIV) [] TEM: HPA Level II VIA 198.4 [] TEM: Microvac/Wipe
Turnar Time:	round	FAX:	Verbals:
	[] 10 Day [] 5 Day [] 3 Day Preliminary FAX/Verbal F	[] 2 Day []	direct village
Sample Number	rs: Client #(s): O Ub	IAT <i>L#</i> (s):	tart) (end)
Chain o	of		
Custody	y ;		5-3 65
	Relinquished: Reccived: Sample Log-in: Sample Prep: Analyzed: QA/QC Review:	Date: Date: Date: Date: Date: Date: Date: Date: Date:	Time:
•	Archived/Relcased: QA/QC Inter	L.	Date: Tunc;

International Asbestos Testing Laboratories 16000 Honzon Way, Unit 100 Mr. Laurel, NI 08054 Tel \$56 231-9449 Fax \$56 231-9818 info@iatl.com

Bulk Material	Samping Log	
Client: HzW Environmental Consultants US 6105 Heisley Rd Mental OH 44060 Phone: 440-357-1560	Project No.: Contact:	10 9004-07 Tran Sablar BY21K PLM
FAX: 440 - 357 - 1710	Analysis:	_ FOR PEM-
· Special Instructions:	·	

aconsulone.	PALLOVIA GIRLS (CAPTA MARKADO)	A COLOR		
01	16409	89		Expansion Material - Fibrous
. 02	3640	1		11
03	3646	991		Expansion Material - Rubbery
04	1640	1992		U .
05	364(1993	-	Expansion material-Fibrons
06.	3640	994		N. Control of the con
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Relinquished:	yw/	. `		Date: 6-11-09	•	Time: 4 pm
Received: Sample Log-in:	 <u> </u>		 -	Date:	-	Time:
Sample Prep: Analyzed:	• •		-	Date:		Time:
QA/QC Review:			- 	Date:	<u>• . </u>	Time:

Page 2 of 2

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

Report Date: 6/4/2009

6105 Heisley Rd.

Project:

CUY-90-1506

Mentor

OH

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

% Asbestos

3628392

Description / Location:

44060

Grey Gasket

Client No.:

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

<u>Type</u> None Detected

None Detected

None Detected

100

Lab No .:

3628393

Description / Location:

Grey Gasket

Client No.:

% Asbestos

Type

% Non-Asbestos Fibrous Material

<u> Type</u>

% 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

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Analysis Method: EPA 600/R-93/116

(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 Comments: 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 FLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used at a confunning technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: B. Faulscit

Approved By:

Date:

6/3/2009

Frank E. Ehrenfeld, III Laboratory Director

Page 5of 1

WWW.	al Asbestos Testing Laboratories ***********************************	y. SuiteB	Tol, 856 231-9449 Fax 856 231-9818
	- Chair	of Custody -	
Client:	HzW Environmental Consultants 6105 Hostey Rd. Mentor, on 44060	Project Name Project No.:	: Cuy-90-1506 H09004-07
Phone: FAX:	440 - 357 - 1260 440 - 357 - 1510	Contact: Pager:	Joan Sablar
Special Instruction	ns:	po* 5[49-	-04
Туре:	Asbestos	Lead	Other
	[] Air [] Soil [X] Bulk [] Dust [] Water [] Other	[] Air [] [] Bulk [] [] Water []	Soil Paint Other
Analysi	s Method:		
	[] PCM: NIOSH 7400 [] [] PCM: OSHA [] [] PCM: Other [] [] AAS: NIOSH 7082 (Air) [] [] AAS: Lead in Drinking Water [] AAS: Lead in Paint ASTM D3335-85a [] AAS: Lead Dust/Wipe [] AAS: Other Metals / Soil	PLM: Bulk Asbestos EPA 600 PLM: Point Counting 198.1 PLM: NOB via 198.1 (PLM o If <1% by PLM, to TEM to meet NYSDOH requirement (**call to confirm TAT!)	TEM: NIOSH 7402 TEM: PPA Level II via 198.4 TEM: Microvac/Wipe s.** TEM: Asbestos in Water
Turnaro	ound	FAX:	Verbals:
Time:		- date / t	time date / time
	[] 10 Day [] 5 Day [] 3 Day Preliminary FAX/Verbal		I Day [] 6 hour [] RUSH
Sample			· · · · · · · · · · · · · · · · · · ·
Number		(end) IATL#(s)	start) (end) ~ (A
Chain of Custody			6 UIGH
	Relinquished: Received: Sample Log-in: Sample Prep: Analyzed: QA/QC Review:	Date: Date: Date: Date: Date: Date: Date:	- 10 1 1 1 Ab car 1
	Archived/Released: QA/QC In	terLAB Use:	Date: Time: (\Q \q \q \q \)

International Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mt. Laurel, NJ 08034 Tel 856 231-9449 Fax 856 231-9818 info@iatl.com

		l I	Bulk M	aterial Sampli	ng Log			÷.
Client: -	LW Environ. 6105 Hei Mentoc	sley Rd		UE P	roject Name: roject No.	Cuy Ho	-90-1506 9004-07	
Phone: _ FAX: _	. <u>440 - 3</u> . 440 - 3				ontact: nalysis:	Jan S Bolk	Sabler. PLM.	
Special In	structions:	•						
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elinquished: eccived: imple Log-in; imple Prep: ialyzed: /QC Review:			مسل		Date: 5-24-Date: Date: D		Time: 7	pm

CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

6105 Heisley Rd.

Mentor

ОН

44060

Report Date:

6/4/2009

Project:

CUY-90-1524

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

3628455

Description / Location:

Grey Caulk

Client No.: 01

% Asbestos

<u>Туре</u>

% Non-Asbestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628456

Description / Location:

Grev Caulk

Client No.: 02

% Ashestos

Type

% Non-Asbestos Fibrons Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628457

Description / Location:

Grey Caulk

Client No.:

% Asbestos

Type

% Non-Asbestos Fibrous Muterial

Туре

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628458

Description / Location:

Grey Caulk

Client No.: 04

% Asbestos

Type

% Non-Asbestos Fibrous Material

<u>Type</u>

% 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

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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 quantifation. (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 FLM 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: B. Faulseit

Approved By:

Date:

6/3/2009

Page I of 4

Frank E. Ehrenfeld, III Laboratory Director

CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

6105 Heisley Rd.

Mentor

OH

44060

Report Date: 6/4/2009

Project:

CUY-90-1524

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

3628459

Description / Location:

White/Brown Non Fibrous

Client No.: 05

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628460

Description / Location:

White/Brown Non Fibrous

Client No.: 05

% Asbestos

Type

% Non-Ashestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628461

Description / Location: Brown Transite

% Asbestos

Client No.: 07

Type

% Non-Asbestos Fibrous Material

Туре

% Non-Fibrous Material

2.5

Chrysotile

None Detected

None Detected

PC 67.5

Crocidolite

3628462 Lab No.:

Description / Location:

Brown Transite

% Asbestos

Client No.: 08

% Non-Fibrous Material

40

Түре Chrysotile

None Detected

% Non-Asbestos Fibrous Material

Type None Detected

Crocidolite

PC 58.5

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

ATHA Lab No. 100188

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Analysis Method: EPA 600/R-93/116

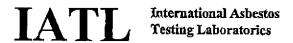
(PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Foint Counting regimen. 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 FLM 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: B. Faulseit

Date:

6/3/2009

Page 2.065



CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

Report Date: 6/4/2009

6105 Heisley Rd.

CUY-90-1524 Project:

Mentor

44060 OH

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .:

% Asbestos

3628463

Description / Location:

Brown Tar Paper

Client No.:

Type

% Non-Fibrous Material

None Detected

None Detected

% Non-Asbestos Fibrous Material

Турс Cellulose

Project No.:

50

Lab No.:

3628464

Description / Location:

Brown Tar Paper

Client No.: 10

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

50

Cellulose

50

Lab No.:

3628465

Description / Location:

Tan Transite

Client No.: 11

% Ashestos

Туре

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

40

Chrysotile

None Detected

None Detected

PC 56.9

Crocidolite

Lab No.:

3628466

Description / Location:

Tan Transite

Client No.: 12 % Asbestos

% Non-Fibrous Material

40 2.5

Type Chrysotile Crecidolite % Non-Asbestos Fibrous Material None Detected

Type None Detected

PC 57.5

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Method: EPA 600/R-93/116

(PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this neethod. (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was deceated 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. Blectron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: B. Faulscit

Date:

6/3/2009

Page 3 d56

Iuternational 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:

6/4/2009

Project:

CUY-90-1524

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .:

3628467

Description / Location:

Brown Tar Paper

% Asbestos

Type

% Non-Ashestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

Client No.: 13

None Detected

Cellulose

50

Lab No.:

3628468

Description / Location:

Brown Tar Paper

Client No.: 14

% Anbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

50

Cellulose

50

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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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 aspestos was detected but is not quantifiable under the Point Counting regimen. Analysis includes all distinct separable layers in accordance with HPA 600 Method. If not reported or otherwise noted, layer is either not present or the clical 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 equact be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: B. Faulseit

Date:

6/3/2009

International Asbestos Testing Laboratories WWW. Storted Warghanish Tcl. 856 231-9449 9000 Commerce PKWY. Mt. Laurel, New Jersey 08054 Fax 856 231-9818 - Chain of Custody -HzW Environmental Consultants Cuy-90-1524 Client: Project Name: 6105 Heller Rd. Project No.: H09004-07 Mention, on 44060 440-357-1260 Phone: Contact: Joan Sablar FAX: 440-357-1510 Pager: Special PO# 5149-09 Instructions: Type: <u>Asbestos</u> Lead Other Air Soil) Air Soil Bulk Dust Bulk Paint Water Other Water Other Analysis Method: PCM: NIOSH 7400 PLM: Bulk Asbestos EPA 600 TEM: AHERA PCM: OSHA PLM: Point Counting 198.1 TEM: NIOSH 7402 PCM: Other PLM: NOB via 198.1 (PLM only) TEM : EFA Level II If <1% by PLM, to TEM via 198.4 TEM: Microvec / Wipe AAS: NIOSH 7082 (Air) to meet NYSDOH requirements ** TEM: Asbestos in Water AAS : Lead in Drinking Water (**call to confirm TAT!) TEM : Bulk Analysis AAS: Lead in Paint ASTM D3335-85a TEM: NOB 198.4 AAS: Lead Dust/Wipe TEM: Other AAS : Other Metals / Soil Total Dust : NIOSH 0500 Turnaround FAX: Verbals: Time: date / time date / time [] 10 Day [] 5 Day [] 3 Day [] 2 Day [] I Day [] 6 hour [] RUSH Preliminary FAX/Verbal Results Requested by: Sample Numbers: Client #(s): IATL#(s): (start) (end) Chain of Custody: . . Relinquished: J William Date: 5 Received: Date: Sample Log-in: Time: Date: Time Sample Prep: Date: Analyzed: Date: QA/QC Review: Date: Time: Archived/Released: QA/QC InterLAB Use: Date:

International Asbestos Testing Laboratories 15000 Horizon Way, Unit 100 Mt Laurel, NJ 08054

Tel \$56 231-9449 Fax \$56 231-9818 info@iad.com

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Phone:FAX:	W Environmentor Mentor M40-21 H40-3 muctions:	sley R OH 57-131	44060 6	Project Name: Project No.: Contact: Analysis:	H	1-90-1524 09004-07 Sabler C PLM
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Infernational Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mf. Laurel, NJ 08054 Tel 856 231-9449 Fax 856 231-9818 info@iatl.com

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Phone: _ FAX: _	- 440-3	sley Rd OH 44	toso	Project Name: Project No.: Contact: Analysis:	Ho.	-90-1524 3004-07 Sablar - Pling.	
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CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

6105 Heisley Rd.

Mentor

OH

44060

Report Date: 6/4/2009

Project:

CUY-90-1628EW

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

3628432

Description / Location:

Tan Caulk

Client No.:

% Ashestos

Type

% Non-Asbestos Fibrous Material

Тупс

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628433

Description / Location:

Tan Caulk

Client No.: 02

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628434

Description / Location: Brown Tar Paper

Client No.; % Ashestos

03

Type

% Non-Asbestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

Callulose

60

Lab No :

3628435

Description / Location:

Brown Tar Paper

Client No.: % Asbestos

<u>Type</u>

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

Name Detected

None Detected

Cellulose

60

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Page I d64

Analysis Method: EPA 600/R-93/116

(PC) Indicates Stratified Point Count Method performed. Method not performed valess 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: B. Faulseit

Approved By:

Date:

6/3/2009

Prank E. Ebrenfeld, III Laboratory Director

CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

Report Date: 6/4/2009

6105 Heisley Rd.

Project:

CUY-90-1628EW

Mentor

OH

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .:

3628436

Description / Location:

44060

Tan Gasket

Client No.:

% Asbestos

Type.

% Non-Asbestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No .:

<u>Asbestos</u>

3628437

Description / Location:

Tan Gasket

Client No.: 06

Type:

% Non-Ashestos Fibrous Material

Туре

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No .:

Description / Location:

Grey Gasket

Client No.: % Ashestos

07

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

PC 2.1

Chrysotile

3

Other

PC 94.9

Lab No.:

3628439

Description / Location:

Grey Gasket

Client No.: % Asbestos

08

. Түре

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

PC 2.5

Chrysotile

Other

PC 94.5

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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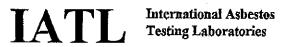
Analysis Method: EFA 600/R-93/116

(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: B. Faulseit

Date:

6/3/2009



CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

Report Date:

6/4/2009

6105 Heisley Rd.

Project:

CUY-90-1628EW

Mentor

OH

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

% Asbestos

3628440

Description / Location:

44060

Tan Gasket

Client No.: 80

Type

% Non-Asbestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628441

Description / Location:

Tan Gasket

Client No.:

% 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

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Analysis Method: EPA 600/R-93/116

(PC) Indicates Stravified 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 asbertos was detected but is not quantifiable toxiler the Point Counting regimen. Analysis includes all distinct acparable 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 eagnet be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: B. Faulseit

Date:

6/3/2009

International Asl ************************************		y, SuiteB	Tel. 856 231-9449 Fax 856 231-9818
Client:	HzW Environmental Consultants 6105 Hostey Rd. Mentor, on 44060	1 of Custody - Project Name; Project No.:	CUY-90-1628EW HO 9004-07
Phone: FAX: Special	440 - 357-1260 ' 440 - 357 - 1510	Contact: Pager: Po-# 5149-09	Joan Sablar
Instructions: Type:	Asbestos		
	[] Air [] Soil [X] Bulk [] Dust [] Water [] Other	[] Bulk [j	Other Soil Paint Other
Analysis Me	thod:		
	[] PCM: NIOSH 7400 [X] [] PCM: OSHA [] [] PCM: Other [] [] AAS: NIOSH 7082 (Air) [] AAS: Lead in Drinking Water [] AAS: Lead in Paint ASTM D3335-85a [] AAS: Cother Metals / Soil	PLM: Bulk Asbestos EPA 600 PLM: Point Counting 198,1 PLM: NOB vis 198,1 (PLM onl If <1% by. PLM, to TEM v. to meet NYSDOH requirements (**call to confirm TAT!)	ia 198.4 TEM: Microvac/Wire
Turnaround Time:		FAX:	Verbals:
	0 Day [] 5 Day [📉 3 Day Preliminary FAX/Verbal	[] 2 Day [] I Results Requested by:	same a surface
Sample Numbers:	Client #(s): 0 [_ [0]	IATL#(s):_ cnd) (ste	art) (end) Total:
Chain of Custody:			TO E CENTER
Recei Samp Samp Analy	le Log-in: 03 6/	Date: Date: Date: Date: Date: Date: Date:	Fime: Upm Fime: Upm Fime: Upm Fime: Upm Fime: 12009
Az	chived/Released: QA/QC Int	erLAB Use: D	etc:Time:

International Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mt Laurel, NI 08054

Tel 856 231-9449 Fax 856 231-9818 info@iatl.com

Bulk l	Material	Samp	ling	Log
--------	----------	------	------	-----

	لِيَ	Bulk	Material Sam	pling Log		
_ <u>_</u> _	W Environme, 105 Haisle	y Rd	<u> </u>	Project Name: Project No.:		90-1628EW
Phone: FAX:	Mentor, 0 .440-357 440-35	- 1960		Contact:	_ Joan	Sablar. C.PLM.
Special Instr	uctions:		<u> </u>			
CONSULATION OF THE PARTY OF THE	かいさいしょうったいしょうくじん あご りんざい			COTTO POR ST. SA.		THE COUNTY STORY
01 16	28432		Epoxy N	laterial		
02 36	28433		1)			
03 6	28434	· · · ·	- Far-Cell	whose materis	2	
٥٧ ١6:	28435	-	t(
05 362	28436		Basket	Material		
06 62	28437)/			
07 362	8438		Gasket	Material		
og 362	8439	-	1			
09 362	844.0		Thick Gas	Ket moterible	·	
.10 \$62	8441					
Relinquished: Received: Sample Log-in: Sample Prep: Analyzed: A/QC Review:		Jul.		Date: 5-29-6 Date: Date: Date: Date: Date:	_	fime: 4 p.m. fime:

International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mr. 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: 6/4/2009

Project:

CUY-90-1628L

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: Client No.: 3628415

Description / Location:

Tan Non Fibrous

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628416

Description / Location:

Tan Non Fibrous

Client No.: 02

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

TOO

Lab No .:

Description / Location:

Black Tar Paper

Client No.:

% Asbestos

Type

% Non-Asbestos Fibrous Material

Турс

% Non-Fibrous Material

None Detected

Nane Detected

50

Cellulose

50

Lab No.:

3628418

Description / Location: Black Tar Paper

Client No.: 04

% Asbestos

Type:

% Non-Asbestos Fibrous Material

Турс

% Non-Fibrous Material

None Detected

None Detected

50

Cellulose

40

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Method: EPA 600/R-93/116

(PC) Indicates Strutified Point Count Mathod 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 sabestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results causes be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit

Analysis Performed By: B. Faulseit

Approved By:

Date:

6/3/2009

Frank E. Ehrenfeld, III Page 1 66 Laboratory Director

CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

6105 Heisley Rd.

Mentor

OH

44060

Report Date: 6/4/2009

Project:

CUY-90-1628L

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

3628419

Description / Location:

Tan Gasket

Client No.:

% Asbestos

Type

% Non-Asbestos Pibrous Material

Type

% Non-Fibrous Material

PC 2.1

Chrysotile

Other

PC 95.9

Lab No.:

3628420

Description / Location:

Tan Gasket

Client No.: 06

% Asbestos

<u> Type</u>

% Non-Asbertos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628421

07

Description / Location:

Tan Gasket

Client No.:

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.;

3628422

Description / Location:

Tan Gasket

Client No.:

Түре

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

% Axbestos None Detected

None Detected

None Detected

None Detected

NIST-NYLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Performed By: B. Faulseit

Date:

6/3/2009

International Asbestos Testing Laboratories Tol. 856 231-9449 WORDO HOOLAGU WOOD BOLLONDS 9000 Commerce Pkwy. Fax 856 231-9818 Mt. Laurel, New Jersey 08054 ~ Chain of Custody -HZW Environmental Consultants Project Name:_ Client: Project No.: <u> Ho</u>9004 - 07 Mention, on 44060 440-357-1260 Joan Sablar Phone: Contact: 440-357-1510 FAX: Pager; 00# 5199-09 Special Instructions: Type: Asbestos Lead Other] Air] Bull Air Soil Sgil Bulk Dust Bulk Paint Water Other Water Other Analysis Method: PCM: NIOSH 7400 PLM: Bulk Asbestos EPA 600 TEM: AHERA PCM: OSHA PLM: Point Counting 198.1 TEM: NIOSH7402 PCM: Other PLM: NOB via 198,1 (PLM only) TEM : EPA Level II If <1% by PLM, to TEM via 198.4 TEM: Microvac / Wipe] AAS: NIOSH 7082 (Air) to meet NYSDOH requirements ** TEM: Asbestos in Water AAS : Lead in Drinking Water (**call to confirm TAT!) TEM: Bulk Analysis AAS: Lead in Paint ASTM D3335-85a TEM: NOB 192,4 AAS: Lead Dust/Wipe * * TEM : Other AAS : Other Metals / Soil Total Dust : NIOSH 0500 Turnaround FAX: Verbals: Time: date / time] 10 Day [] 5 Day [X 3 Day [] 2 Day [] l Day [] 6 hour [] RUSH Preliminary FAX/Verbal Results Requested by: Sample Numbers: Client #(s); IATL#(s): (start) Chain of Custody: ...

Relinquished: Date: Time: Received: Date: Лime: Sample Log-in: Date: Time: Sample Prep: Date: Analyzed: 1 Date: Time:) QA/QC Review: ŹŨŨŸ Date. Time: Archived/Released: QA/QC InterLAB Use:

Informational Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mr. Laurel, NI 08054

Tel 856 231-9449 Fax 856 231-9818 info@intl.com

Bulk Material	Sampling Log

	Bulk	Material Sampling Log	
Client: HzW Environ	sley Rd	Project No.:	Cuy-90-16284 Ho 9004-27
Phone: <u>140-3</u>	6Н 44060 57- <i>181</i> 0 3 <i>5</i> 7-1510	Contact: Analysis:	Joan Sabby BUK PLM.
Special Instructions:	<u>.</u>		
Consulation of the Consulation o			
01 3628415		Epoky Material	
02 3628416		1(
03 3628417		Tor cellulose material	
04 628418		((
05 3628413		Gasket Materia	
06 3628420			
07 3628421		Gasket Motoral	
08 3628422		lr .	
			l. U.
Relinquished: Received: Sample Log-in: Sample Prep: Analyzed: QA/QC Review:	jr	Date: 5-2 Date: Date: Date: Date: Date: Date:	7-09 Time: Y 2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1
		Page	V of 2

6105 Heisley Rd.

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

CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

Report Date:

Project:

CUY-90-1628R

ÓН 44060 Mentor

H09004-07 Project No.:

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

3628407

Description / Location:

Tan Non Fibrous

Client No.:

% Asbestos

<u>Type</u>

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628408

Description / Location:

Tan Non Fibrous

Client No.: 02

% Ashestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

3628409

Description / Location: Brown Tar Paper

Client No.: 03

% Asbestos

Type:

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

50

Cellulose

50

Lab No.:

3628410

Description / Location:

Brown Tar Paper

Client No.:

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

% Asbestos None Detected

None Detected

Callulose

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Method: EPA 600/R-93/116

(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 at a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: B. Faulscit

Approved By:

Date:

6/3/2009

Page 70F2

Frank E. Ehrenfeld, III Laboratory Director



CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

Report Date: 6/4/2009

6105 Heisley Rd.

Project:

CUY-90-1628R

Mentor

OH

44060

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

% Asbestos

3628411

Description / Location:

Brown Gasket

Client No.: 05

Type

None Detected

Type None Detected

None Detected

% Non-Asbestos Fibrous Material

None Detected

% Non-Fibrous Material 100

Lab No.:

3628412

Description / Location:

Brown Gasket

Client No.: 06

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

Lab No.:

3628413

Description / Location:

Grey Gasket

Client No.: % Asbestos

07

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

PC 2.5

Chrysotile

Other

PC 94.5

Lab No .:

3628414

Description / Location:

Grey Gasket

Client No.:

% Asbestos Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

PC 2,1

Chrysotile

3

Other

PC 94.9

NIST-NYLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Performed By: B. Faulseit

Date:

6/3/2009

Fage 2 of 2

WHO WALLESTON	Asbestos Testing Laboratories William 9000 Commerce Pkw ew Jersey 08054	ly. SuiteB		Tel. 856 231-9449 Fax 856 231-9818
	- Chair	of Custody -		· .
Client:	HzW Environmental Consultants 6105 Hostey Rd. Mention, on 44060	Project Name: Project No.:	Ho 9004-0	1678 R
Phone: FAX:	440 - 357-1260 440 - 357 - 1510	Contact: Pager;	Joan Sabl	ar
Special Instructions:		PO# 5149-09		
Type:	Asbestos	Lead	Oth	ier.
	[] Air [] Soil [X] Bulk [] Dust [] Water [] Other	[] Air [] [] Bulk [] [] Water []	Soil Paint Other	<u> </u>
Analysis N	Method:			
	[] PCM: NIOSH 7400 [X]. [] PCM: OSHA [] [] PCM: OSHA [] [] PCM: Other [] [] AAS: NIOSH 7082 (Air) [] AAS: Lead in Drinking Water [] AAS: Lead in Paint ASTM D3335-85a [] AAS: Lead Dust/Wipe * [] AAS: Other Metals / Soil	PLM: Bulk Asbestos EPA 600 PLM: Point Counting 198.1 PLM: NOB via 198.1 (PLM or If <1% by PLM, to TEM v to meet NYSDOH requirements (**call to confirm TAT!)	[] TEI via 198.4 [] TEI *** [] TEI [] TEI [] TEI [] TEI	M: AHERA M: NIOSH 7402 M: EPA Level II VI: Microvac/Wipc M: Asbestos in Water VI: Bulk Analysis M: NOB 198,4 VI: Other AI Dust: NIOSH 0500
Turnarous	nd	FAX:	Verbals:	
Time:		date / t	ime	date / time
E.] 10 Day [] 5 Day [🗐 3 Day Preliminary FAX/Verba	[] 2 Day [] I I Results Requested by:	IDay []6ho	и []RUSH
Sample Numbers:	Client #(s):	<u> </u>	text()	(end) Total
Chain of Custody:				6
Ro Sa Sa	elinquished: cocived: mple Log-in: mple Prep: nalyzed: /QC Keview:	Date: Date: Date: Date: Date: Date: Date: Date:	E	ine: I pm
•	Archived/Released: QA/QC In	nterLAB Use:	Date Time	
		72	4-4	7

International Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mr. Laurel, WI 08054

Tel 856 231-9449 Fax 856 231-9818 info@ratl.com

Bulk Material Sampling Lo	ġ
---------------------------	---

Client:	HZW Environmental Consultants UC 6105 Heisley Rd	. · . ·	Project Name: Project No.:	<u>Cuy-90-1628</u> K
Phone:	Mentor of 44000 .440-357-1860		Contact:	Jan Sablar
FAX:	440-357-1510	• .	Analysis:	BULK PLM.
Special.	Instructions:	•	·	

ensum Sonoten	Solmple 4	(eard				No est
01.	628407			Epoxy Material		
02	3628408		,	Ч		
03 3	628409			Tar Cellulose Mai	en2	
0년	3625410	·- -		(1		
	628411			Gasket Material		
06	628412		 	ll		
و ٥٦	628413			Gasket Matain		
08	628414			11		k

				<u>.</u>		
Relinquished:		√ ✓ .	•	Date: 5-29-09	Time: Y.	
Received:		<u> </u>		Date:	Time:	_
Sample Log-in: _			<u></u> " - :	Date:	Time:	_,,
Sample Frep:			•	.Date:	Time:	_
Analyzed:			·	Date:	· Time:	
QA/QC Review:				Date: **	r'. Time:	
				_ 0		•

Page 2 of 2

9000 Commerce Parkway Suite B Mt. Larrel, 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:

6/2/2009

Project:

CUY-90-1640

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

3625285

Description / Location:

Tan Non Fibrous

Client No.: % Ashestos

Type

% Nun-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.: Client No.: 3625286

Description / Location:

Tan Non Fibrous

% Asbestos

Туре

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.: Client No.: 3625287

Description / Location:

Black/Grey Fibrous

% Asbestos

Туре

% Non-Ashestos Fibrous Material

Турс

% Non-Fibrous Material

None Detected

None Detected

30

Ccllulose

Lab No .:

3625288

Description / Location:

Black/Grey Fibrous

Client No.:

* Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

Cellulose

70

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Method: EPA 600/R-93/116

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Analysis Performed By: E. Smith

Approved By:

Date:

6/2/2009

Page 1 of 2 74

Frank E. Ebrenfeld, III Laboratory Director

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

Report Date:

6/2/2009

Project:

CUY-90-1640

Project No.;

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .: Client No.: 3625289

Description / Location:

44060

Tan Non Fibrous

Expansion Joint

% Ashestos

<u>Type</u>

% Non-Ashestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.: Client No.: 3625290

06

Description / Location:

Tan Non Fibrous

Expansion Joint

% Asbestos

Type

% Non-Ashestos 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

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Analysis Performed By: E. Smith

Date:

6/2/2009

Page 2 of 2 75

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

ОН

44060

Report Date: 0

6/12/2009

Project:

CUY-90-1640

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.:

3641001

Description / Location:

Grey Gasket

Under Old Railings

Client No.:

% Asbestos

Турс

% Non-Asbestos Fibrous Material

Түре

% Non-Fibrous Material

PC 3.9

Chrysotile

None Detected

None Octobed

PC 96.1

Lab No.: Client No.: 3641002

80

Description / Location:

Grey Gasket

Under Old Railings

% Axbestos

Type

% Non-Asbestos Fibrous Material

1P-

% Non-Fibrous Mater<u>ial</u>

PC 3.7

Chrysotile

None Detected

None Detected

PC 96.3

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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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 at 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: L. Solebello

Approved By:

Date:

6/12/2009

Frank E. Ehrenfeld, III Laboratory Director

A/QC Review:

Archived/Released:

International Aspestos Testing Laboratories Tel. 856 231-9449 WHOOM RECORDS A WAR A SECURIOR 9000 Commerce PKWY. Fax 856 231-9818 Mt. Laurel, New Jersey 08054 - Chain of Custody -CUY-90-1640 HZW Environmental Consultants Client: Project Name: 6105 Hoday Rd. H09004-07 Project No .: Mention, on 44060 440-357-1260 Contact: Phone: Joan Sablar 440-357-1510 FAX: Pager: Special DO# Instructions: Type: Asbestos Lead Other Air Soil] · Air Soil Bulk Bulk Dust Paint Water Other Water Other. Analysis Method: PCM: NIOSH 7400 PLM: Bulk Asbestos EPA 600 TEM: AHERA PCM; OSHA PLM: Point Counting 198.1 TEM: NIOSH7402 PCM; Other PLM: NOB via 1981 (PLM only) TEM: EPA Level II If <1% by PLM, to TEM via 198.4 TEM: Microvac/Wipe AÁS : NIOSH 7082 (Air) to meet NYSDOH requirements ** TEM Asbestos in Water AAS: Lead in Drinking Water (**call to confirm TAT!) TEM : Bulk Analysis AAS: Lead in Paint ASTM D3335-85a TEM: NOB 1984 AAS: Lead Dust/Wipe TEM: Other AAS: Other Metals / Soil Total Dust: NIOSH 0500 Turnaround FAX: Verbals: Time: date / time [] 10 Day [X] 3 Day [] 5 Day : [] 2 Day [] 1 Day [] 6 hour . [] RUSH Preliminary FAX/Verbal Results Requested by: Sample 0h Numbers: Client #(s): IATL#(s): Total: (cnd) Chain of Custody: Relinquished: THAY Date: Received: Date: Time: Sample Log-in: Date: Time Sample Prep: Date: Analyzed: Date Xime:

QA/QC InterLAB Use:

Date;

Date:

(Time:

. Informational Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mg Laurel, NI 08054

Special Instructions:

Tel 856 231-9449 Fax 856 231-9818 info@iatl.com

	Bulk Material S	ampling Log	
Client:	HZW Environmental Consultants LLC	Project Name:	Cuy-90-1640
	6105 Heisley Rd	Project No.;	409004-07
٠.	mentor of 44060		
Phone:	440-357-1860	Contact:	Jan Sabler
FAX:	440-351-1910-	. Analysis:	BOIK PLIA.

0-1 3625285 Epoxy Material

02 1625287 Tar Cellulase miterial

04 3625288 II

05 1625280 II

						
Relinquished:	W		-	Date: 5-27-09	Time:	· Ypy.
Received:				Date:	Time:	
Sample Log-in;	-		. :	Date:	Tîme:	
Sample Prep;				Date:	Time:	
Analyzed:				Date:	Time:	
QA/QC Review:		·		Date:	Time:	·

Page 2 of 2.

International Asbestos Testing Laboratories Tel. 856 231-9449 **WORDSteelstal Washingtonia** 9000 Commerce PKNY. Suite B Fax 856 231-9818 Mt. Laurel, New Jersey 08054 - Chain of Custody -HZW Environmental Consultants CUY-90-1640 Client: Project Name: 6105 Heter Rd. Project No.: Mention, on 44060 440-357-1260 Joan Sablar Phone: Contacta FAX: 440-357-1510 Pager: po# 5/62 Special -09. Instructions: Type: Asbestos Lead Other 3 Aic Soil]. Air Soil Bulk Dust Ţ Bulk Paint Water. Other Water Other. Analysis Method: PCM: NIOSH 7400 PLM: Bulk Asbestos EPA 600 TEM: AHERA PCM: OSHA PLM : Point Counting 198.1 TEM: NIOSH 7402 PCM: Other PLM; NOB via 198.1 (PLM only) TEM : EPA Level II If <1% by PLM, to TEM via 198.4 TEM: Microvac / Wipe AAS: NIOSH 7082 (Air) to meet NYSDOH requirements ** TEM: Asbestos in Water AAS: Lead in Drinking Water (**call to confirm TAT!) TEM : Bulk Analysis AAS: Lead in Paint ASTM D3335-85a TEM: NOB 198.4 AAS: Lead Dust/Wipe TEM: Other AAS : Other Metals / Soil_ Total Dust : NIOSH 0500 Turnaround FAX:_ Verbals: Time: date / time date / time. [] 10 Day [] 5 Day [] 3 Day [] 2 Day [] 1 Day [] 6 hour [X] RUSH Preliminary FAX/Verbal Results Requested by: Sample Numbers: Client #(s): IATL#(s): Total: Chain of Custody: ... Relinquished: Date: Time: Received; Date Sample Log-in: Time: Sample Prep: Time: Analyzed: Time: QA/QC Review; Archived/Released: QA/QC InterLAB Use:

. International Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mf. Laurel, NI 08054

Tel 856 231-9449 Fax 856 231-9818 info@iatl.com

		Bulk	Material Samp	ling Log		
Client:	6105 Hei		ts Use	Project Name: _ Project No.: _	CUY-90 H09004	
Phone:	<u> </u>	6H 44060 57-1960 57-1910		Contact:	Join Sal Bizik	olar PLkg-
- Special L	nstructions:					
	ESTOPICHE					33.64
07	1641	001	Gasket under old	Matrial railings		
- 08	3641	002	1/			
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Relinquished: Received: Sample Log-in: Sample Prep: Analyzed: A/QC Review:		pi s		Date: 6//-09 Date: Date: Date: Date: Date:	Time Time Time Time Time Time	

NO. 6616

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: 6/2/2009

Project:

CUY-90-1651L & R

Project No .:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: Client No.: 3625250

01

Description / Location:

Tan Non Fibrous

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.:

% Asbestos

3625251

Description / Location:

Tan Non Fibrous

Client No.:

Tyrx

% Non-Asbestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.: Client No.:

% Aspestos

3625252

Type

Description / Location:

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

% Non-Asbestos Fibrous Material 45

Collulose

55

Lab No.:

3625253

Description / Location:

Black Fibrous

Black Fibrous

Client No.:

% Asbestos

Type

% Non-Ashestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

None Detected

None Detected

45

Cellulose

55

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 he reproduced except in full, without written approval of the laboratory.

Analysis Method: EPA 600/R-93/116

(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 asboatos 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 arbestos 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:

6/2/2009

Page 1 of 281

Frank E. Ehrenfeld, III Laboratory Director

CERTIFICATE OF ANALYSIS

Client:

HZW Environmental Consultants

6105 Heisley Rd.

Mentor

OH

44060

Report Date: 6/2/2009

Project:

CUY-90-1651L & R

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No .:

3625254

Client No.: 05 Description / Location:

Tan Non Fibrous

Expansion Joint

% Ashestos

Type

% Non-Asbestos Fibrous Material

Турс

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.: Client No.: 3625255

Description / Location:

Tan Non Fibrous

Expansion Joint

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

None Detected

None Detected

100

Lab No.: Client No.: 3625256

Description / Location:

Black Fibrous

% Asbestos

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

None Detected

None Detected

45

Cellulose

Lab No.:

3625257

Description / Location:

Black Fibrous

Client No.:

Type

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

% Ashestos None Detected

None Detected

45

Cellulose

35

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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Analysis Method: EPA 600/R-93/116

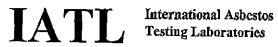
(PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this limit of quantifation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. 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 Comments be missed by FLM 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:

6/2/2009

Page 2 of 282



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: 6/12/2009

Project:

CUY-90-1651 L+R

Project No.:

H09004-07

BULK SAMPLE ANALYSIS SUMMARY

Lab No.: Client No.: 3641003

09

Description / Location:

Tan/Grey Gasket

Under Old Railings

% Asbestos

Турс

% Non-Asbestos Fibrous Material

Type

% Non-Fibrous Material

PC 3.1

Chrysotile

None Detected

None Detected

PC 96.9

Lab No.: 36 Client No.: 10

3641004

Description / Location:

Grey Gasket

Under Old Railings

% Asbestos

<u> 1\pc</u>

% Non-Asbestos Fibrous Material

<u>Type</u>

% Non-Fibrous Material

PC 3.4

Chrysotile

None Detected

None Detected

PC 96.6

NIST-NVLAP No. 101165-0

NY-DOH No. 11021

AIHA Lab No. 100188

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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: L. Solebello

Approved By:

Date:

6/12/2009

Frank E. Ehrenfold, III Laboratory Director

Page 1 of 83

International Asbestos Testing Laboratories

***Contract Contract Pkwy. Suite B

Mt. Laurel, New Jersey 08054

TeL 856 231-9449 Fax 856 231-9818

		in of Custody -	
Client:	6105 Hastey Rd. Mention, on 44060	Project Name: Project No.:	CUY-90-1651 L+R 409004-07
Phone: FAX: Special Instructions:	440 - 357-1260 440 - 357 - 1510	Contact: Pager: P0# 5/49-09	Joan Sablar
Туре:	Asbestos	<u>Lead</u>	Other
	[] Air [] Soil [X] Bulk [] Dust [] Water [] Other	[] Bulk [] Pa	oil unt ther
Analysis N	Method:		
	[] PCM: NIOSH 7400 [X] [] PCM: QSHA [] [] PCM: Other [] [] AAS: NIOSH 7082 (Air) [] AAS: Lead in Drinking Water [] AAS: Lead in Paint ASTM D3335-85a [] AAS: Lead Dust/Wipe " [] AAS: Other Metals / Soil	PLM: Bulk Ashestos EPA 600 PLM: Point Counting 198.1 PLM: NOB via 198.1 (PLM only) If <1% by PLM, to TEM via to meet NYSDOH requirements ** (**call to confirm TAT!)	[] TEM: AHERA [] TEM: NIOSH 7402 [] TEM: EPALevel II. 198.4 [] TEM: Microvac / Wipe [] TEM: Asbestos in Water [] TEM: Bulk Analysis [] TEM: NOB 198.4 [] TEM: Other [] Total Dust: NIOSH 0500
Turnaroun	nd	FAX:	Verbals:
. I] 10 Day [] 5 Day [] 3 Day Preliminary FAX/Verba	[] 2 Day [] 1 Da	
Sample Numbers:	Client #(s):	(end) [ATL#(s):	Total:
Chain of Custody:			
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•	Archived/Released: QA/QC In	tcrLAB Use: Date	
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International Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mt Laurel, NI 08054 Tel 856 231-9449 Fax 856 231-9818 info@iatl.com

Bulk Material Sampling Log

Client: HzW Environmental Consultants US 6105 Heisley Rd	Project Name: Project No.:	Cuy-90-1651 L+x
Trientor OH 44060 Phone: 440-257-1960	Contact:	Jan Sablar
FAX: 440 - 357 - 1540 -	Analysis:	BULK PLM
Special Instructions:		

	· · · · · · · · · · · · · · · · · · ·				
		O NOTE	Section Baseline	arran September	No.
01	3625 250		Epoxy Material		
. 02	1625251		. []		
. 03	3625252		- Tar-Cellutose Majeri	-Q	
oy:	4625253				
. 05	3625254		Expansion joint Madona	e	
06	3625255		γI		
07	3625256		Tar Cellulose Materia	e	
. 98' .	3625257			•	
				:	

	 						
Relinquished:	 1	<u>: </u>	Date:		Time:		
Received:	 0 -		Date:		Time:		
Sample Log-ia:			. Date:	· '	Time:		•
Sample Prep:	 •		.Date:	<u> </u>	Time:		
Analyzed:		<u> </u>	Date:		Time:		
QA/QC Review:	 		Date:	~	Time:		
			Down	7.	. 7		

Page _____ of ___

International Asbestos Testing Laboratories

**MONTAGENTAL MONTAGEN 4000 Commerce Plany. Saile B

Mt. Laurel, New Jersey 08054

Tel. 856 231-9449 Fax 856 231-9818

	- Chain	of Custody -	
Client:	HzW Environmental Consultants	Project Name:	
	6105 Hestey Rd. Mentor, on 44060	Project No.:	409004-07
Phone:	440-357-1260	Салtact:	Joan Sablar
FAX:	440 - 357 - 1510	Pager;	
Special Instruction	19:	po* 5162-09	
Type:			
J K	<u>Asbestos</u>	<u>Lead</u>	Other
:	[] Aîr [] Soil [X] Bulk [] Dust [] Water [] Other		Soil Paint Other
Analysi:	s Method:	•	
	[] PCM: NIOSH 7400	PLM: Bulk Asbestos EPA 600 PLM: Point Counting 198,1 PLM: NOB via 198,1 (PLM on If <1% by PLM, to TEM v to meet NYSDOH requirements (**call to confirm TAT!)	ia 198.4 [] TEM: Microvac/Wipe
Turnarc Time:	ound	FAX:	Verbals:
A AMEC.		date / tir	nc date / tiene .
	[] 10 Day [] 5 Day [] 3 Day Preliminary PAX/Verbal	[] 2 Day [] I Results Requested by:	Day [] 6 hour [] RUSH
Sample Numbers Chain of Custody:	(start) (c)	art) (end)
	Relinquished: Received: Sample Log-in: Sample Prep: Analyzed: QA/QC Review:		Time tone Time: Ti
	Archived/Released: QA/QC Inte	erLAB Usc:	The Type of Type of the Type of the Type of Type o

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. International Asbestos Testing Laboratories 16000 Horizon Way, Unit 100 Mr. Lauret, NI 08054

Tel 856 231-9449 Fax 856 231-9818 info@iatl.com

Bulk	Material	Sampling Log	

Phone:FAX:	HIW Environ 6105 He Mientor 440 - 3 440 - istructions:	isley Rd	±4060	3 UC	Project Name: Project No.: Contact: Analysis:	Ho.	90-1691 Lt 1004-0 Sabler PLM
Consultants Consultants		Entoja			o control of the		
09	3641	<u> </u>			et Motival railings		
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Relinquished: Received: Sample Log-in: Sample Prep: Analyzed: AVQC Review:	U	<i>A</i>			Date: 6 // C Date: Date: Date: Date: Date: Date: 6/12/6		ime: Upr