# Limited Asbestos Inspection Report

Administrative Building
36 Sandwich Road
Bourne, Massachusetts

## Bourne Public Schools

Bourne, Massachusetts

August 11, 2009

FUSS & O'NEILL
*Disciplines to Deliver*

**Fuss & O'Neill EnviroScience, LLC**
50 Redfield Street, Suite 100
Boston, MA 02122

Project No. 20070914.A2E

FUSS & O'NEILL
EnviroScience, LLC

*Disciplines to Deliver*

August 11, 2009

Mr. Peter Simpson
Director of Business Services
Bourne Public Schools
36 Sandwich Road
Bourne, MA 02532

**RE: Limited Asbestos Inspection Services**
**Administrative Building**
**36 Sandwich Road, Bourne, Massachusetts**
Fuss & O'Neill EnviroScience, LLC No. 20070914.A4E

Dear Mr. Simpson:

Enclosed is the report for the limited inspection for asbestos or suspect asbestos containing materials conducted at the Administrative Building located at 36 Sandwich Road in Bourne, Massachusetts. The services were performed on July 21, 2009 by a Fuss & O'Neill EnviroScience, LLC licensed inspector.

If you have any questions regarding the contents of this report, please do not hesitate to contact Bob May at (617) 282-4675, extension 4701. Thank you for this opportunity to have served your environmental needs.

Sincerely,

Robert L. May, Jr.
Vice President

Stephen W. Connelly
Senior Vice President

RLM:adw
Enclosure

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Suite 100
Boston, MA
02122

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*Connecticut*
*Massachusetts*
*New York*
*Rhode Island*
*North Carolina*
*South Carolina*

FUSS & O'NEILL
EnviroScience, LLC

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# 1. Introduction

On July 21, 2009, a Fuss and O' Neill EnviroScience, LLC (EnviroScience) representative, Sunny Cai, performed a limited inspection and sampling for asbestos containing materials (ACM) at the Administrative Building located at 36 Sandwich Road in Bourne, Massachusetts. The inspection was performed for the Bourne Public Schools which is the Local Education Agency (LEA) responsible for compliance with federal and state regulations regarding asbestos in school buildings. Mrs. Cai is a licensed asbestos inspector in the Commonwealth of Massachusetts. Refer to *Appendix A* for licensing documentation.

This inspection was performed in response to recommendation from EnviroScience to the LEA that previously unidentified materials or currently presumed asbestos containing materials, included in management plans required by the U.S. Environmental Protection Agency (USEPA), Asbestos Hazard Emergency Response Act (AHERA), be sampled to determine asbestos content.

No destructive investigation for concealed materials was performed. The results of this inspection and sampling is intended to assist Bourne Public Schools with the operations and maintenance requirements in compliance with USEPA, AHERA requirements for visible and accessible ACM within the school building. The results of this testing shall be utilized to update the existing management plan for the school building. The inspection and sampling was performed for only the materials listed herein which were either previously not identified or included in the management plan of if included listed as Presumed Asbestos Containing Materials (PACM).

The results of this limited inspection and sampling do not meet the requirements of an inspection prior to renovation or demolition as required by the USEPA, National Emission Standards for Hazardous Air Pollutants (NESHAP). A NESHAP inspection would be required if planned renovation or demolition is planned associated with the school building.

The results of the inspection and sampling are summarized below.

# 2. Asbestos Inspection

## 2.1 Introduction

Fuss and O'Neill EnviroScience, LLC sampled visible and accessible suspect ACM. Materials that were sampled are analyzed by Polarized Light Microscopy (PLM). Locations, material type, sample identification, and asbestos content of ACM identified by bulk sample analysis are given in Table 1 of the Results section. Materials determined to be non-asbestos containing are included in Table 2 of the Results section.

The Inspector collected samples of suspect asbestos containing materials in accordance with USEPA recommendations and AHERA protocols. The protocols included the following:

1. Surfacing Materials (such as plaster, spray-on fireproofing, etc.) were collected in a randomly distributed manner representing each homogenous area based on the overall quantity represented by the sampling as follows:

    a. Three (3) samples were collected from each homogenous area that is less than or equal to 1,000 square feet.
    b. Five (5) samples were collected from each homogenous area that is greater than 1,000 square feet but less than or equal to 5,000 square feet.
    c. Seven (7) samples were collected from each homogenous area that is greater than 5,000 square feet.

2. Thermal System Insulation (such as pipe insulation, tank insulation, etc.) was collected in a randomly distributed manner representing each homogenous area. Three (3) samples were collected from each material. Also, a minimum of one (1) sample of any patching materials applied to TSI presuming the patched area is less than 6 linear or square feet was also collected.

3. Miscellaneous Materials (such as floor tile, construction mastics, etc.) had a minimum of one (1) sample of each homogenous material type. Sampling was conducted in a manner sufficient to determine asbestos content of the homogenous material. In some instances, more than a single sample was collected of miscellaneous materials based on the judgment of the inspector.

Inspector(s) collected samples and prepared proper chain-of-custody forms for transmission of samples to an accredited laboratory for analysis by PLM.

## 2.2 Results

Utilizing the USEPA protocol and criteria the none of the sampled materials were determined to be ACM (Asbestos 1% or greater):

Utilizing the USEPA protocol and criteria the following Table 1 identifies materials determined to be **non-ACM**:

**TABLE 1**
**NON-ASBESTOS CONTAINING MATERIALS**

| SAMPLE LOCATION | MATERIAL TYPE | SAMPLE NO. |
|---|---|---|
| Throughout Building | Ceiling Plaster Skim Coat | 0724SC01 A-E |
| Throughout Building | Ceiling Plaster Rough Coat | 0724SC02 A-E |
| Boiler Room | Chimney Cement | 0724SC03 A-C |
| Throughout Building | Joint Compound | 0724SC04 A-C |
| Throughout Building | Drywall | 0724SC05 A-C |

The results of laboratory analysis summarized above are located in *Appendix B.*

## 2.3 Discussion

The USEPA, Occupational Safety and Health Administration (OSHA), and the Commonwealth of Massachusetts Division of Occupational Safety (DOS) defines any material that contains greater than one percent (>1%) asbestos, utilizing PLM, as being an ACM. The Commonwealth of Massachusetts Department of Environmental Protection (DEP) defines any material that contain equal to or greater than one percent (1%) asbestos as being an ACM. Materials that are identified as "none detected" are specified as not containing asbestos. Friable materials that are identified as containing less than ten percent (<10%) asbestos, are recommended to be analyzed further utilizing the EPA 400 point-counting technique to verify asbestos content by the USEPA. A property owner may elect to presume the results are asbestos containing based on the initial PLM results without the additional analysis by the EPA 400 point-counting technique. None of the materials were determined to contain asbestos by PLM and none require further analysis by the EPA 400 point-counting technique.

Additionally, the USEPA has suggested that materials that are non-friable organically bound materials such as mastic adhesives, etc are recommended for further confirmatory analysis utilizing Transmission Electron Microscopy (TEM) prior to disturbance in renovation or demolition. None of the collected samples were non-friable organically bound materials and as such none were analyzed by TEM. .

## 2.4 Conclusion

Materials included in the current AHERA Management Plan that were sampled and determined to be non-asbestos will be removed from the AHERA Management Plan. The suspect materials identified but not previously included in the AHERA Management Plan were also determine to be non-asbestos and no further action is required. The results of this inspection must be maintained by the LEA as part of the permanent AHERA records maintained for the school building a copy of which should be both at the school building as well as central office of the LEA.

Report prepared by Environmental Technician I, Jonathan L. Hand.

Reviewed by:

Robert L. May, Jr.
Vice President

Stephen W. Connelly
Senior Vice President

RLM/adw

# Appendix A

## Inspector's Licenses

*Commonwealth of Massachusetts*

*Division of Occupational Safety*

*Laura M. Marlin, Commissioner*

Asbestos Inspector

SHAN SHAN CAI

Eff. Date 11/17/08

Exp. Date 11/16/09

AI000153

Member of C.O.N.E.S.

BO

09



BOSTON-RENEW

# INSTITUTE FOR ENVIRONMENTAL EDUCATION, INC.

16 Upton Drive, Wilmington, MA 01887
(Phone) 978.658.5272

IEE

IEE

*This is to certify that*
Shan Shan Cai

***has completed the requisite training, and has passed an examination for accreditation as:***

## Asbestos Inspector

**pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646**

September 17-19, 2007
Course Dates

Course Location
Institute for Environmental Education
16 Upton Drive
Wilmington, MA 01887

September 19, 2007
Examination Date

07-2551-102-204016
Certificate Number

September 19, 2008
Expiration Date

Training Director

# INSTITUTE FOR ENVIRONMENTAL EDUCATION, INC.

16 Upton Drive, Wilmington, MA 01887
(Phone) 978.658.5272

IEE

IEE

*This is to certify that*

Shan Shan Cai

***has completed the requisite training, and has passed an examination for reaccreditation as:***

## Asbestos Inspector Refresher

**pursuant to Title II of the Toxic Substance Control Act, 15 U.S.C. 2646**

October 24, 2008
Course Dates

Course Location
Institute for Environmental Education
16 Upton Drive ,
Wilmington, MA 01887

October 24, 2008
Examination Date

08-3520-106-204016
Certificate Number

October 24, 2009
Expiration Date

Training Director

FUSS & O'NEILL
EnviroScience, LLC

# Appendix B

## Asbestos Sample Results and Chains of Custody

EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
Phone: (781) 933-8411 Fax: (781) 933-8412 Email: bostonlab@emsl.com

Attn: **Bob May**
**Fuss & O' Neill EnviroScience, LLC**
**50 Redfield Street**
**Boston, MA 02122**

Fax: (413) 647-0018 Phone: (617) 282-4675
Project: **20070914.A4E / Bourne School; Admin Bldg**

Customer ID: ENVI54C
Customer PO:
Received: 07/27/09 9:20 AM
EMSL Order: 130902803

EMSL Proj:
Analysis Date: 7/29/2009

## Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| Sample | Description | Appearance | % Fibrous | % Non-Fibrous | % Type |
| 0724SC01A<br>*130902803-0001* | Ceiling; Plaster Skim Coat | White<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC01B<br>*130902803-0002* | Ceiling; Plaster Skim Coat | White<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC01C<br>*130902803-0003* | Ceiling; Plaster Skim Coat | White<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC01D<br>*130902803-0004* | Ceiling; Plaster Skim Coat | White<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC01E<br>*130902803-0005* | Ceiling; Plaster Skim Coat | White<br>Non-Fibrous<br>Heterogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC02A<br>*130902803-0006* | Ceiling; Plaster Rough Coat | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC02B<br>*130902803-0007* | Ceiling; Plaster Rough Coat | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | None Detected |

Analyst(s)

*Steve Grise (19)*

Renaldo Drakes
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client.Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn 7 Constitution Way, Suite 107, Woburn MA NVLAP Lab Code 101147-0, AIHA IHLAP 180179, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102

EMSL Analytical, Inc.
7 Constitution Way, Suite 107, Woburn, MA 01801
Phone: (781) 933-8411 Fax: (781) 933-8412 Email: bostonlab@emsl.com

Attn: **Bob May**
**Fuss & O' Neill EnviroScience, LLC**
**50 Redfield Street**
**Boston, MA 02122**

Fax: (413) 647-0018 Phone: (617) 282-4675
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EMSL Proj:
Analysis Date: 7/29/2009

## Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| Sample | Description | Appearance | % Fibrous | % Non-Fibrous | % Type |
| 0724SC02C<br>*130902803-0008* | Ceiling; Plaster Rough Coat | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 0724SC02D<br>*130902803-0009* | Ceiling; Plaster Rough Coat | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 0724SC02E<br>*130902803-0010* | Ceiling; Plaster Rough Coat | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 0724SC03A<br>*130902803-0011* | Chimney; Cement | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 0724SC03B<br>*130902803-0012* | Chimney; Cement | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 0724SC03C<br>*130902803-0013* | Chimney; Cement | Gray<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |
| 0724SC04A<br>*130902803-0014* | Wall; Joint Compound | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | **None Detected** |

Analyst(s)

*Steve Grise (19)*

Renaldo Drakes
or other approved signatory

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EMSL Proj:
Analysis Date: 7/29/2009

## Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 Method using Polarized Light Microscopy

| | | | Non-Asbestos | | Asbestos |
|---|---|---|---|---|---|
| Sample | Description | Appearance | % Fibrous | % Non-Fibrous | % Type |
| 0724SC04B<br>*130902803-0015* | Wall; Joint Compound | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC04C<br>*130902803-0016* | Wall; Joint Compound | White<br>Non-Fibrous<br>Homogeneous | | 100% Non-fibrous (other) | None Detected |
| 0724SC05A<br>*130902803-0017* | Wall; Sheetrock | Gray<br>Fibrous<br>Heterogeneous | 15% Cellulose | 85% Non-fibrous (other) | None Detected |
| 0724SC05B<br>*130902803-0018* | Wall; Sheetrock | Gray<br>Fibrous<br>Heterogeneous | 15% Cellulose | 85% Non-fibrous (other) | None Detected |
| 0724SC05C<br>*130902803-0019* | Wall; Sheetrock | Gray<br>Fibrous<br>Heterogeneous | 10% Cellulose | 90% Non-fibrous (other) | None Detected |

Analyst(s)

*Steve Grise (19)*

Renaldo Drakes
or other approved signatory

Due to magnification limitations inherent in PLM, asbestos fibers in dimensions below the resolution capability of PLM may not be detected. Samples reported as <1% or none detected may require additional testing by TEM to confirm asbestos quantities. The above test report relates only to the items tested and may not be reproduced in any form without the express written approval of EMSL Analytical, Inc. EMSL's liability is limited to the cost of analysis. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client.Samples received in good condition unless otherwise noted.

Samples analyzed by EMSL Analytical, Inc. Woburn 7 Constitution Way, Suite 107, Woburn MA NVLAP Lab Code 101147-0, AIHA IHLAP 180179, CT PH-0315, MA AA000188, RI AAL-107T3 and VT AL357102



**THIS IS THE LAST PAGE OF THE REPORT.**

1309028 03

FUSS & O'NEILL
EnviroScience, LLC

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275 Promenade Street, Suite 350, Providence, RI 02908 (401) 861-3070 Fax: (401) 861-3076

# SAMPLE LOG FOR ASBESTOS BULKS

Sheet 1 of 2

Project Name: Bourne School Project No. 20070914.A42

Building: Admin Building Project Manager: Bob May

| | Sample ID | Sample Location | Material | Result (%) |
|---|---|---|---|---|
| 1 | 0724SC01A | Ceiling | plaster Skim Coat | |
| 2 | B | | | |
| 3 | C | | | |
| 4 | D | | | |
| 5 | Z | | | |
| 6 | 0724SC02A | | plaster Rough Coat | |
| 7 | B | | | |
| 8 | C | | | |
| 9 | D | | | |
| 10 | Z | | | |
| 11 | 0724SC03A | ~~Chimney~~ Chimney | ~~Mortar~~ Cement | |

Analysis Method: ☑ PLM ☐ Other _____ Turnaround Time 48h

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____. Please call the EnviroScience Laboratory at (860) 953-2700 if analyses will be late.

Fax Results To: EnviroScience Consultants, Inc. Laboratory at 413-647-0018

Special Instructions: FedEx #799895365447

RECEIVED JUL 27 2009 By SA 0920

Samples Collected By: Sig CAI Date: 7/24/09 Time: _____

Samples [Rec'd] [Sent By]: [ Sig CAI ] Date: [ ] [ ] Time: [ ] [ ]

Samples Received By: _____ Date: _____ Time: _____

Shipped To: ☑ EMSL (State) _____ ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ UPS Overnight ☐ UPS Ground ☑ Other _____

FUSS & O'NEILL
EnviroScience, LLC

275 Promenade Street, Suite 350, Providence, RI 02908 (401) 861-3070 Fax: (401) 861-3076

www.fando.com

130902803

# SAMPLE LOG FOR ASBESTOS BULKS

Sheet 2 of 2

Project Name: Bourne School Project No. 20070914.A42

Building: Admin Building Project Manager: Bob May

| | Sample ID | Sample Location | Material | Result (%) |
|---|---|---|---|---|
| 12 | 072409C03B | ~~Chimney~~ Chimney | ~~Mortar~~ Cement | |
| 13 | C | " | " | |
| 14 | 0724 SC04A | Wall | Joint Compound | |
| 15 | B | | | |
| 16 | C | | | |
| 17 | 0724SC05A | | Sheet Rock | |
| 18 | B | | | |
| 19 | C | | | |
| | | | | |
| | | | | |
| | | | | |

Analysis Method: ☑ PLM ☐ Other _____ Turnaround Time 48h

Based on the turnaround time indicated above, analyses are due to EnviroScience on or before this date: _____ Please call the EnviroScience Laboratory at (860) 953-2700 if analyses will be late.

Fax Results To: EnviroScience Consultants, Inc. Laboratory at 413-647-0018

Special Instructions: _____

RECEIVED
JUL 27 2009
By SA 0920

Samples Collected By: Sig CAI Date: 7/24/09 Time: _____

Samples [Rec'd][Sent By]: [ Sig ][ CAI ] Date: [ ][ ] Time: [ ][ ]

Samples Received By: _____ Date: _____ Time: _____

Shipped To: ☑ EMSL (State) _____ ☐ Other _____

Method of Shipment: ☐ Fed Ex ☐ UPS Overnight ☐ UPS Ground ☑ Other _____